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ANNUAL STATISTICAL REPORT

COMMUNICABLE DISEASES

SEXUALLY TRANSMITTED DISEASES

HUMAN IMMUNODEFICIENCY

VIRUS INFECTIONS

AND AIDS

MANITOBA HEALTH - 1990

Released: December 1991

Manitoba

Health

Healthy Public Policy
Programs Division

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Winnipeg, Manitoba, CANADA
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Dear Reader:

Manitoba Health is pleased to provide you with the 1990 Annual Statistical Report of Communicable Diseases, Sexually Transmitted Diseases, Human Immunodeficiency Virus Infections and AIDS.

Most of you will know that Manitoba Health, and indeed Manitoba's health system, is undergoing a period of restructuring and change. As that change proceeds, the need for reliable, up-to-date health information of the kind provided in this Annual Report will become even more important, extending into other areas of importance to the health of Manitobans.

As we move into these new areas of interest, I would like to acknowledge the splendid contribution of Dr. Margaret Fast to the health of Manitobans during her tenure as Director of Communicable Disease Control.

Yours truly,

Pete Sarsfield, M.D.
Director, Health Promotion,
Protection & Disease Prevention

Re: Table of Contents

Sorry, but some little imp put the Table of Contents in the middle of this document. The Table of contents is found after page 30. The first page of this Table refers to all the information preceding it, i.e. all the information you wanted to know about communicable diseases in Manitoba. Turn the page and you will find the Table of Contents for all the STD, HIV and AIDS information.

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ANNUAL STATISTICAL REPORT
MANITOBA HEALTH 1990

INTRODUCTION

As specified in the regulations of the Public Health Act, Manitoba Health is responsible for the surveillance and control of communicable diseases in the province. In 1990, these activities were carried out by the Communicable Disease Control Directorate, Community Health Services Division, Manitoba Health.

Case reports of all communicable diseases are received from laboratories and health care professionals. In 1990, directorate staff assisted local health units in managing communicable diseases, and compiled statistical reports of notifiable diseases. Notification is not accepted unless the physician confirms the occurrence of illness and/or infection. The case definitions used in 1990 were in accordance with those of Health and Welfare Canada. The statistical reports are shared with local health units and the Laboratory Centre for Disease Control, Health and Welfare Canada.

The following is a summary of all communicable diseases reported in Manitoba in 1990. It was prepared from the communicable diseases databases using the EPI INFO programs from the Centers for Disease Control, Atlanta.

I. SUMMARY OF COMMUNICABLE DISEASES

Table One presents a summary of the number of cases of the reportable communicable diseases in 1990, as well as giardiasis and campylobacteriosis. Statistics for 1989 are presented for comparison.

Table Two presents the age and sex distribution of the reported cases for all of the communicable diseases.

Table Three presents the number of cases which occurred in each health region in the province in 1990 (see map, Appendix A).

Table Four presents the number of cases of selected diseases by the month of onset.

Table Five presents the crude incidence rates for selected communicable diseases.

Table Six presents the age specific rates for selected communicable diseases.

Table Seven presents the crude incidence rate for selected communicable diseases by health region.

These tables are discussed below.

1. VACCINE PREVENTABLE DISEASES

Manitoba spends approximately two million dollars annually for vaccines recommended for routine use in the province, and maintains a computerized record of the immunizations received by all children born on or after January 1, 1980, in an effort to reduce the incidence of vaccine preventable diseases. Further information regarding immunization levels may be found in the Manitoba Immunization Monitoring System Annual Report, 1990. Total doses of vaccine distributed for the province are shown in Figure 2. Total doses of selected vaccines distributed and administered are shown in Figure 3. The vaccine preventable diseases include measles, mumps, rubella, diphtheria, pertussis, tetanus, polio, hepatitis B and influenza. Other diseases, such as rabies, are also preventable but immunization is recommended only for persons who, because of special circumstances such as their occupation, have been or may be exposed to the virus.

No cases of **measles** were reported in Manitoba in 1990. This compares to 6 reported cases in 1989, and 5 cases in 1988. Although seven possible cases of **rubella** were investigated, none was confirmed, and there were only two cases of **mumps** reported.

No cases of **diphtheria** were identified in 1990, although 8 asymptomatic carriers of toxigenic **C.diphtheriae** were reported. The majority of carriers were from isolated northern communities. The **pertussis** outbreak identified in 1989 continued in 1990, with 116 laboratory confirmed cases, and many more suspected cases. The highest age specific rate was 64/100,000, in children under 5 years of age. However, cases occurred in all age groups, and the largest number of cases without laboratory confirmation occurred in school aged children. The crude incidence rate was highest in Parklands, but all regions except Norman reported cases.

There were no cases of **tetanus** or **polio** in 1990. If immunization levels are maintained, these diseases should remain rare.

No human cases of **rabies** were reported in 1990. Rabies vaccine and rabies immune globulin were provided to 52 persons in 1990, following possible exposure to rabid animals. Dogs, cats and skunks were the animals most often involved, although cattle and horses were also implicated frequently. In 1990, rabies was epizootic in skunks in southern Manitoba, and most exposures occurred in that area.

Cases of **influenza** occur in Manitoba each winter. Annual immunization against influenza is recommended for persons living in institutions, persons with medical illness who may be more likely to have complications of influenza, and persons who are 65 years of age or older. During the winter of 1989-90, 182 cases of influenza were confirmed by the Cadham Provincial Laboratory. Laboratory confirmation was by culture, or seroconversion. One hundred and eighty-one were influenza A and one was influenza B. Figure 1 depicts the seasonal pattern for laboratory confirmed cases of influenza A for the winter of 1989-90. The majority of cases occurred in Winnipeg, however the highest rates were in Westman and Central health regions. Twelve confirmed cases occurred in children less than one year of age. Twenty-eight percent of cases occurred in children 1 - 14 years of age; 31% were 15 - 64 years of age, and 34% were 65 or older.

In 1990, 36 cases of acute **hepatitis B** were reported. As in previous years, the age specific rate was highest in the 20 - 39 year age group. Twenty-five of the 36 cases occurred in Winnipeg; 4 cases had no fixed address. The likely source of infection is given below:

MODE OF TRANSMISSION	NUMBER OF CASES 1989	1990
INJECTION DRUG USE	19	14
HOMOSEXUAL CONTACT	2	4
HETEROSEXUAL CONTACT	4	10
HEALTH CARE WORKER	1	0
UNKNOWN	8	6
UNABLE TO LOCATE	2	2
TOTAL	36	36

Acute hepatitis B continues to occur in persons who use injection drugs, with no decrease in case numbers in the past 6 years. There was a decline in heterosexual contact as the risk activity in 1989, however in 1990 heterosexual contact is again a major risk activity. The number of cases in homosexual persons remains low. Prevention efforts need to be targeted to the injection drug using population.

Hepatitis B vaccine is provided to persons at acute risk of exposure to the virus. During 1990, Manitoba Health expanded its immunization program, and now provides hepatitis B vaccine to susceptible household contacts under 6 years of age, and to sexual partners of hepatitis B surface antigen carriers. In 1990, vaccine and hepatitis B immune globulin were provided to 67 infants born to mothers who were carriers of hepatitis B surface antigen. This compares to 52 such infants in 1989 and 63 in 1988. The majority of these babies completed the three dose series of vaccine. Universal screening of prenatals for HBsAg is in place in Manitoba, decreasing the likelihood that carrier mothers will not be identified.

The total number of doses of hepatitis B vaccine and hepatitis B immune globulin provided by Manitoba Health is available in Figure 2, which lists the vaccine products supplied by Manitoba Health in 1990.

2. ENTERIC DISEASES

The following are included in the enteric (gastrointestinal) diseases: amebiasis, campylobacteriosis, verotoxigenic **E.coli** infections, giardiasis, hepatitis A, salmonellosis, shigellosis, typhoid and paratyphoid.

a) Salmonellosis: Figure 3

During 1990, 312 cases of salmonellosis were reported in Manitoba. This compares to 248 cases in 1989 and 219 in 1988. This represents a further 13% increase in salmonellosis. The crude incidence rate is 27 per 100,000 compared to 22 in 1989. Much of the increase can be attributed to two large common source outbreaks which occurred during the year.

The distribution of cases by health region and age and sex can be seen in the Tables. The peak incidence continues to be in southern and western regions of the province, including Winnipeg. The increased incidence in persons aged 20 to 39 years is due to the common source outbreaks. Children under the age of five continue to have by far the highest incidence rate. Cases were reported throughout the year (Figure 3).

Thirty seven serotypes were isolated. The most frequently identified serotype was **S.enteritidis**; again however this is due to the two outbreaks in which it was implicated. **S.typhimurium** and **S.hadar** continue to be common. **S.heidelberg** isolates increased from 22 in 1989 to 44 in 1990; all of these were sporadic cases with no common source identified. Poultry is the main reservoir for these organisms.

The complete listing of serotypes excluding typhi and paratyphi is given below:

S.agona	10	S.javiana	1
S.anatum	1	S.kentucky	1
S.berta	1	S.meunchen	2
S.blockley	4	S.montevideo	6
S.braenderup	3	S.newport	2
S.brandenburg	3	S.ohio	2
S.bredeney	1	S.oranienburg	1
S.bovis morbificans	2	S.potsdam	1
S.chester	1	S.rubislaw	2
S.enteritidis	71	S.senftenberg	1
S.group D	1	S.species	5
S.group B	1	S.st.paul	21
S.hadar	41	S.stanley	5
S.havana	1	S.tennessee	4
S.heidelberg	44	S.thompson	11
S.infantis	4	S.uganda	2
S.istanbul	1	S.virchow	6
S.java	1		

Each of the above cases was investigated. The likely source and route of transmission were:

1. Food:
   - Source food not identified: 95
   - Food in the home: 40 (3 - raw milk)
   - Other transmission site: 6 (3 - camping; 3-work)
   - Common source outbreaks: 63 (3 weddings)
   - Travel: 31 (see location below)

2. Person to person:
   - Home: 8
   - Workplace: 1

3. Other:
   - Home: 4 (turtles)
   - Workplace: 1

4. Unknown source and route of transmission: 57

A total of 23 family clusters were involved in the above cases. In 14 instances there were two cases; in 6 instances there were three cases; in one instance there were 4 cases. and in one outbreak there were 6 cases among three related families. In 16 of these clusters there was evidence of transmission within the family, either from continued exposure to a contaminated source, or person to person spread.

The number of travel associated cases of salmonellosis has remained constant for the past three years. As can be seen

from the table below, one third of travel associated cases originated in Mexico.

Travel Related Salmonellosis, 1990

SEROTYPE	NUMBER OF CASES	DESTINATION
S.AGONA	2	MEXICO
S.BLOCKLEY	1	BELIZE
S.CHESTER	1	RUSSIA
S.ENTERITIDIS	2 1 1 1 1	MEXICO VENEZUELA CHILE CYPRUS ASIA
S.GROUP D	1	PERU
S.HADAR	1 1 1	MEXICO CHILE BOSTON
S.HAVANA	1	BAHAMAS
S.HEIDELBERG	1	MEXICO
S.INFANTIS	1	NAMIBIA
S.MONTEVIDEO	1 1	CUBA THAILAND
S.NEWPORT	1	HONG KONG
S.ORIENBURG	1	MEXICO
S.SENFTENBERG	1	MEXICO
S.SPECIES	1	PORTUGAL
S.ST.PAUL	2	MEXICO
S.THOMPSON	1	LAS VEGAS
S.TYPHIMURIUM	1 1 1 1	PHILIPPINES SAUDI ARABIA EUROPE ROMANIA
S.UGANDA	1	AFRICA

Typhoid and Paratyphoid

Four cases of typhoid were reported, and no cases of paratyphoid were identified. The four cases were part of a family cluster linked to travel to an endemic area.

b) Campylobacteriosis: Figure 4

Campylobacteriosis is not yet a notifiable disease. However, all laboratory isolations of campylobacter species are reported. A total of 178 cases were identified in 1990, compared to 182 cases in 1989 and 177 cases in 1988. Of these, 150 were investigated by the local public health agency. The peak age specific incidence was in children less than five years of age (47/100,000) with a second peak in persons aged 20-39 (24/100,000). The highest crude incidence rate was again in the south western health region of the province.

The organisms isolated are given below:

C.jejuni, biotype not specified:	86
C.jejuni, biotype I:	41
C.jejuni, biotype II:	34
C.coli, biotype not specified:	1
C.coli, biotype I:	14
C.coli, biotype II:	2

SOURCE AND ROUTE OF TRANSMISSION

Investigation and follow-up of reported cases identified the following presumed source/route of transmission:

Raw milk	22
Restaurant meal	28
Exposure to animals/raw meat	25
Travel	19

Mexico	4
Jamaica	3
Thailand	2
Costa Rica	1
Trinidad	1
Ecuador	1
France	1
USA/Canada	2
Pakistan	1
Morocco	1
Not specified	2

Other	16
Food at home	11
Water	3
Work	2
Unknown	40
Not investigated	28

Raw milk continues to be a common source of infection for campylobacteriosis. Exposure to animals or animal carcasses (especially chickens) is frequently implicated as the route of transmission.

c) Verotoxigenic E.coli: Figure 5

Infection with verotoxigenic **E.coli** (VTEC) is a notifiable condition in Manitoba. Reported cases are investigated to determine the likely source and to institute control measures. Manitoba first reported cases in 1988 (a total of 57). In 1989, 115 cases were reported and it was anticipated that the number of cases would continue to increase in 1990, although efforts were made to inform the public of methods of prevention. However, only 58 laboratory confirmed cases were identified in 1990. The following summarizes information collected in the surveillance and control of these cases.

The majority of laboratories in Manitoba include procedures for isolation and presumptive identification of **E.coli** 0157 in tests of stool from patients with bloody diarrhea. Reports of free verotoxin in stool are referred for investigation, as are positive culture results; however such cases are not notifiable unless culture is subsequently positive.

LABORATORY ISOLATES OF VTEC IN MANITOBA, 1990

IDENTIFICATION	YES	NO	UNKNOWN
0157	58	1	-
H7	46	0	12
VEROTOXIN PRODUCTION	47	0	11

Cases were reported from all regions of the province. As in previous years, however, the majority of cases were reported from the city of Winnipeg (particularly the suburbs) and the southwestern area of the province which together accounted for 46/59 cases. Case reports from the northern areas of the province were infrequent. Crude incidence rates ranged from a

high of 19.9 per 100,000 in southwestern Manitoba to a low of 2.3 per 100,000 in eastern Manitoba.

An effort was made to forward all isolates to the Laboratory Centre for Disease Control in Ottawa for phage typing. The results are presented in the table below. Types 1, 14 and 4 were the most frequently identified. Type 1 and type 14 were more likely to be associated with an outbreak, although the small case numbers make this finding difficult to interpret. Type 4 was confined to the southwestern area of the province, and type 14 was also more frequently identified there or in adjacent rural regions. It is interesting to note that types 4, 14 and 32 were also identified in the ground beef survey carried out in Manitoba recently.

PHAGE TYPE BY LOCATION OF CASE

PHAGE TYPE	WINNIPEG	SOUTHWEST	OTHER	TOTAL
1	6	6	0	12
2	1	0	0	1
4	0	7	1	8
8	1	0	0	1
14	2	5	2	9
31	1	0	0	1
32	1	0	2	3
40	0	1	0	1
54	1	0	0	1
TOTAL	13	19	5	37

Completed investigation reports were available on 47 of 58 confirmed cases, and on one case of hemolytic uremic syndrome in a child with a history of bloody diarrhea. This child did not have laboratory confirmation of infection with VTEC. Four cases occurred in children less than one year of age, and 16 cases in children between the ages of 1 and 5 years. The date of onset of the cases is given in Figure 5. Although the majority of cases occurred in the summer as expected, the highest number of cases per month occurred in October. The reason for this time shift is not clear since no outbreaks were identified at that time.

The majority of cases were symptomatic. Diarrhea was reported for 50 cases, which was bloody in 31 of 47 cases for whom this information was available. Thirty cases were hospitalized. Three developed HUS and one developed thrombotic thrombocytopenic purpura; all recovered.

No cases were linked directly to a specific source by laboratory investigation. However, three cases were linked by time and phage type to attendance at one day care, and four were similarly linked to attendance at a second day care. There were two familial clusters identified. A total of 25 of the case reports indicated that a contact of the case was or had been symptomatic with diarrhea in the week prior to the onset of the index case, although culture reports were not available for most of these contacts.

Possible sources of infection were categorized into: Unknown (insufficient or no information), Foodborne (as suggested by patient food history), or person-to-person spread (occurrence of linked cases in the absence of sharing of food). The probable places where transmission occurred were categorized into: Unknown, Domestic, Daycare or Restaurant. These broad categories are based on the investigative reports and have not been supported by laboratory evidence, e.g., culture of contaminated food. The putative links between source of infection and probable place of transmission are given below. Foodborne transmission is most frequently implicated, with person-to-person transmission occurring primarily in the day care setting. It is difficult to differentiate foodborne and person-tp-person transmission in the home, although in the three cases where this is thought to have occurred, there were no common meals. Particular foods mentioned by cases included raw milk (5 cases) and hamburger-containing dishes (8 cases).

PUTATIVE SOURCE AND PLACE OF TRANSMISSION

	PLACE OF TRANSMISSION				
SOURCE	**UNKNOWN**	**DOMESTIC**	**DAYCARE**	**RESTAURANT**	**TOTAL**
UNKNOWN	11	2	1	2	16
FOODBORNE	0	18	0	14	32
PERSON-PERSON	0	3	8	0	11
TOTAL	11	23	9	16	59

In summary, Manitoba reported only 58 laboratory confirmed cases of VTEC infection in 1990. The geographic distribution did not differ significantly from previous years. Children under the age of 5 years continue to be infected, often in the day care setting. Foodborne transmission is likely the most

frequent source of infection outside the day care, and hamburger continues to be reported as the most likely source. No permanent sequelae occurred in cases identified in 1990; this may be due to the different phage types predominating in that year.

d) Amebiasis

Entamoeba histolytica is the cause of amebiasis, a protozoan infection which is usually transmitted by the fecal oral route. Fifty cases were reported in 1990, compared to 38 in 1989. The peak age specific rate was in persons aged 20-39 (7/100,000). The crude incidence was highest in the northern health regions and the inner city of Winnipeg. Information regarding source and route of transmission is not yet available.

e) Hepatitis A: Figure 6

This viral infection is spread by the fecal oral route. A total of 91 cases of hepatitis A were reported in Manitoba in 1990, compared to 38 cases in 1989. The increase is accounted for by two outbreaks. The first occurred in a community in the central region of the province. The second epidemic was among injection drug users in Winnipeg; 25 cases were identified by the end of the year. This outbreak became apparent in September of 1990, and continued into 1991. Spread appeared to be person-to-person, with most transmission occurring in one downtown hotel. A complete report will be available in the 1991 annual report.

Twenty-six cases acquired the infection during travel:

Mexico	14 cases
India	2 cases
El Salvador	2 cases
Philippines	2 cases
Chile	2 cases

Pakistan, Brazil and Hong Kong: 1 case each.

There was one death due to hepatitis A in 1990; the patient was an adult who died of complications of treatment.

f) Shigellosis: Figure 7

This bacterial infection is in most instances transmitted from person-to-person. In 1990, 41 cases were reported. The highest crude incidence rate was in the south and western parts of the province. The Shigella species identified were as follows:

S.dysenteriae : 0
S.flexneri : 10
flexneri : 3 (travel)
flexneri S1: 1 (travel)

flexneri S2: 4 (reserve)
flexneri S6: 2 (travel)
S.sonnei : 25
S.boydii : 4
boydii S.14: 2 (travel)

Infection was associated with:
Living on a reserve : 15 cases

Travel : 16 cases
Mexico : 8 cases
South America : 2 cases
India : 2 cases
Venezuela : 1 case
Chile : 1 case
Sierra Leone : 1 case
Jamaica : 1 case

Age specific incidence rate was highest in children less than 5 years of age. However, most cases in children were in residents of Indian reserves; most adult cases were among travellers.

g) Giardiasis: Figure 8

Giardiasis is reported by laboratories, but it is not yet a notifiable disease. Two-hundred and seventy-eight cases were reported in 1990, compared to 290 cases in 1989. As in 1989, the majority of the cases occurred in the south central and western part of the province. Peak case numbers occurred in the summer and fall. The age specific rate for children less than five years of age remains very high, at 112 per 100,000. Although in most instances a source could not be identified, family and community clusters were common. Cases were reported from all regions of the province, including isolated northern communities. Travel does not appear to be a common risk factor for infection.

3. DISEASES OF OTHER SYSTEMS

a) Invasive disease caused by Haemophilus influenzae b

In 1990 case reports of all invasive forms of HIB disease were accepted. A total of 15 laboratory confirmed cases were reported, compared to 11 cases of HIB meningitis in 1989. The reports included 14 cases of meningitis and one case of buccal cellulitis, all culture confirmed. In twelve cases the organism was identified as type b; this information was unavailable in two cases. The final case was nontypeable, and was isolated from an adult who presented with a CVA.

Six of the cases were less than 13 months of age, four were 13 to 17 months of age, two were between 18 and 60 months of age,

and three were adults. Thompson Region reported four cases, however these were not linked epidemiologically and originated in four different communities. The Inner City of Winnipeg reported four cases also. There was a preponderance of cases with onset during the winter months.

It is likely that invasive HIB disease continues to be unreported, since no cases of epiglottis for example are included in these reports. The age distribution of the reported cases underscores the urgent need for a vaccine administered in infancy.

b) Bacterial meningitis caused by S.pneumoniae

This organism is a frequent cause of meningitis in adults and children. In 1990, four cases were reported, two in children less than 5 years of age, and two in adults.

c) Bacterial meningitis caused by other organisms

Nine cases of meningitis due to other bacteria were reported. The implicated organisms were streptococci (4 cases, all adults), E.coli (4 cases, all adults), and S.epi (1 case).

d) Meningococcal infections

Eleven cases of meningococcal disease were reported in 1990 compared to seven cases in 1989. The majority of these were meningitis. Six cases were in children less than 5 years of age. Three of the cases occurred in Thompson Region, and two in Norman. These cases were not epidemiologically linked. Four unrelated cases also occurred in Winnipeg. No secondary cases were identified. The Groups were as follows:

Group B - 4 cases
Group C - 3 cases
Non-typeable - 1 case
Unknown - 3 cases

There was one death associated with a Group C case.

e) Meningitis/encephalitis caused by viral infections

Twenty-three cases of viral meningitis/encephalitis were reported. In 5 cases Coxsackie virus was isolated from the CSF, and ECHO virus from 6 cases. The remainder were unidentified enteroviruses. Ten cases were less than 5 years of age, four were 5 to 14 years of age, one was between 15 and 19 years of age, and 8 were 20 to 29 years of age. Sixteen of the cases had onset dates between July 1 and September 30, 1990.

One case of herpes encephalitis in a newborn was reported.

f) Tuberculosis

A complete annual report for tuberculosis control is available from the Central TB Registry. In summary, 88 cases were reported compared to 101 in 1990. The age specific incidence continues to be highest in those over 60 (14 per 100,000). The crude incidence rate is again highest in Thompson Region; however the Inner City of Winnipeg is second with 17 cases per 100,000. This is based on a total of 38 cases reported in the Inner City, which constitutes a major workload for public health staff.

4. RARE COMMUNICABLE DISEASES

Legionellosis, leprosy, tularemia, pasteurellosis, Q-fever, psittacosis and malaria are rarely reported. No cases of Western Equine Encephalitis were reported. Manitoba has reported no cases of Lyme Disease which fit the Case Definitions for endemic Lyme Disease adopted by the Advisory Committee on Epidemiology. **Ixodes dammini** continue to be rare.

TABLE ONE

SUMMARY OF COMMUNICABLE DISEASES IN MANITOBA, 1990

DISEASE	YEAR	
	1989	1990
AMEBIASIS	38	50
BOTULISM	-	-
BRUCELLOSIS	-	-
CAMPYLOBACTERIOSIS	182	178
CHOLERA	-	-
DIPHTHERIA	-	-
E.COLI, VEROTOXIN-PRODUCING	115	58
GIARDIASIS	290	278
HAEMOPHILUS INFLUENZAE B	11	15
HEPATITIS A	38	91
HEPATITIS B	36	36
HEPATITIS, NON-A, NON-B, VIRAL	-	-
HERPES NEONATAL	1	1
LEGIONELLOSIS	2	6
LEPROSY (HANSEN'S DISEASE)	-	1
LISTERIOSIS	4	-
LYME DISEASE	12	-
MALARIA	4	8
MEASLES	6	-
MENINGITIS, PNEUMOCOCCAL	5	4
MENINGITIS, BACTERIAL, OTHER	6	9
MENINGITIS/ENCEPHALITIS, VIRAL	23	23
MENINGOCOCCAL DISEASE	7	11
MUMPS	11	2
PARATYPHOID FEVER	1	-
PERTUSSIS	108	116
PLAGUE	-	-
POLIOMYELITIS	-	-
PSITTACOSIS/ORNITHOSIS	7	5
Q FEVER	-	1
RABIES (HUMAN)	-	-
RUBELLA	12	-
RUBELLA, CONGENITAL RUBELLA SYND.	-	-
SALMONELLOSIS (ALL TYPES)	248	312
SHIGELLOSIS	52	42
TETANUS	-	-
TRICHINOSIS	-	-
TUBERCULOSIS	101	88
TULAREMIA	-	1
TYPHOID FEVER	6	4
YELLOW FEVER	-	-
WESTERN EQUINE ENCEPHALITIS	-	-

Table Two

Age And Sex Distribution
Communicable Diseases In Manitoba 1990

	M\F	< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		> 60	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Amebiasis	-	-	-	3	2	2	1	-	1	1	-	-	4	6	4	8	6	2	6	2	2
Botulism																					
Brucellosis																					
Campylobacteriosis	-	10	2	18	12	8	4	4	1	6	2	10	11	15	16	19	16	3	12	3	4
Cholera																					
Diphtheria																					
E.coli,verotoxin-producing	-	2	2	7	9	6	1	4	1	2	-	1	2	1	4	2	3	1	5	1	4
Giardiasis	-	6	4	47	39	26	14	6	9	5	3	7	4	9	18	21	22	10	17	5	6
Haemophilus Influenzae B	-	3	3	2	4	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1
Hepatitis A, Viral	-	-	-	2	1	5	7	6	5	5	1	7	5	6	3	17	8	6	5	1	1
Hepatitis B, Viral	-	-	-	-	-	-	-	-	-	3	4	3	8	2	3	7	2	4	-	-	-
Hepatitis Non-a Non-b, Viral																					
Herpes, Neonatal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legionellosis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1
Leprosy (Hansen's Disease)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Listeriosis																					
Lyme Disease																					
Malaria	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-	1	-	1	3	-	-
Measles																					
Meningitis, Pneumococcal	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Meningitis, Bacterial, Other	-	-	-	-	1	-	-	-	-	-	-	-	-	2	1	1	-	1	-	2	1
Meningitis/encephalitis, Viral	-	5	4	1	-	2	-	1	1	1	-	-	3	2	1	1	1	-	-	-	-
Meningococcal Disease	-	2	1	1	2	-	-	-	1	-	2	-	-	-	-	-	-	-	-	2	-
Mumps	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Paratyphoid Fever																					
Pertussis	-	16	15	12	11	9	9	7	5	1	3	1	1	1	5	-	10	1	7	-	2
Plague																					
Poliomyelitis [4]																					
Psittacosis/ornithosis	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2	-	-
Q Fever	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Rabies (Human)																					
Rubella																					
Rubella, Congenital Syndrome																					
Salmonellosis (All Types)	-	19	11	16	18	8	7	13	5	6	11	13	26	18	17	15	33	17	29	13	18
Shigellosis	-	1	1	1	6	3	1	-	-	1	1	1	1	-	4	4	7	3	3	4	-
Tetanus																					
Trichinosis																					
Tuberculosis	-	1	-	-	3	-	-	-	-	1	3	3	6	3	5	9	8	10	10	12	14
Tularemia	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Typhoid Fever	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	1
Yellow Fever																					

Table Three

REGIONAL DISTRIBUTION
COMMUNICABLE DISEASES 1990

	N/R	NORMAN	PARKLANDS	WESTMAN	CENTRAL	INTERLAKE	EASTMAN	THOMPSON	WINNIPEG INNER CITY	WINNIPEG NORTH	WINNIPEG SOUTH	WINNIPEG WEST CENTRAL
Amebiasis	-	3	7	3	6	3	4	3	12	6	7	-
Botulism	-											
Brucellosis	-											
Campylobacteriosis	-	2	7	40	23	10	13	2	37	7	30	7
Cholera	-											
Diphtheria	-											
E.Coli,Verotoxin-producing	-	1	2	22	7	3	2	1	5	10	4	1
Giardiasis	-	7	28	93	41	6	10	18	35	12	24	4
Haemophilus influenzae B	-	2	-	1	2	-	1	4	4	1	-	-
Hepatitis A, viral	-	3	1	5	16	2	-	2	31	15	14	2
Hepatitis B, viral	-	-	-	2	1	2	3	-	20	4	2	2
Hepatitis non-A non-B, viral												
Herpes, Neonatal												
Legionellosis	-	-	-	2	-	-	-	1	1	-	1	1
Leprosy (Hansen's Disease)												
Listeriosis												
Lyme Disease												
Malaria	-	-	-	-	1	-	-	-	2	1	4	-
Measles												
Meningitis, Pneumococcal	-	-	1	1	-	-	1	-	-	-	1	-
Meningitis, Bacterial, other	-	1	1	-	-	-	-	1	5	-	1	-
Meningitis/encephalitis, viral	-	-	1	-	1	1	-	2	7	4	4	3
Meningococcal disease	-	2		1	-	-	-	3	3	2	-	-
Mumps	-	-	1	-	-	-	-	-	-	-	1	-
Paratyphoid Fever												
Pertussis	-	-	19	14	12	5	2	3	18	19	15	9
Plague												
Poliomyelitis												
Psittacosis/ornithosis	-	-	-	-	2	-	-	-	2	-	1	-
Q Fever	-	-	-	-	-	-	-	-	-	1	-	-
Rabies (Human)												
Rubella												
Rubella, Congenital Syndrome												
Salmonellosis (All Types)	-	9	5	56	18	17	10	12	67	33	65	20
Shigellosis	-	-	7	14	4	2	1	4	3	6	1	-
Tetanus												
Trichinosis												
Tuberculosis	-	4	1	7	3	-	5	10	38	10	6	4
Tularemia												
Typhoid Fever	-	-	-	-	-	-	-	-	3	1	-	-
Yellow Fever												

Table Four .

1990 MONTH OF ONSET

SELECTED COMMUNICABLE DISEASES

	N/R	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
Amebiasis	2	-	1	-	1	-	3	4	-	7	5	5	7	3	4	2	2	3	1
Campylobacteriosis	-	-	-	-	-	-	2	5	9	10	11	17	21	26	12	17	21	18	19
E.Coli Verotoxin-producing	-	-	-	-	-	-	-	1	2	3	2	6	3	9	12	4	13	3	-
Giardiasis	-	-	-	-	-	-	-	24	30	19	15	8	16	27	33	27	26	38	15
Haemophilus influenzae B			-	-	-	-	3	2	1	-	1	1	-	1	1	-	2	3	-
Hepatitis A, viral	-	-	-	-	2	1	3	8	6	8	4	3	2	4	7	9	16	15	3
Hepatitis B, viral	1	-	1	-	2	-	5	4	2	3	2	1	3	-	3	3	3	2	1
Meningococcal disease	-	-	-	-	-	-	3	-	1	2	-	1	2	-	1	-	-	1	-
Pertussis	1	1	-	-	4	7	10	10	15	12	23	4	4	5	6	5	3	6	-
Salmonellosis (All Types)	4	-	-	-	1	5	16	18	22	69	22	32	20	24	28	22	14	13	2
Shigellosis	-	-	-	-	-	1	2	3	3	2	3	9	3	1	1	3	7	4	-

Table Five

CRUDE INCIDENCE RATE,
SELECTED COMMUNICABLE DISEASES, 1990

RATE PER 100,000

DISEASE	YEAR	
	1989	1990
AMEBIASIS	3.38	4.42
CAMPYLOBACTERIOSIS	16.17	15.75
E.COLI, VEROTOXIN PRODUC.	10.21	5.13
GIARDIASIS	25.77	24.60
HAEMOPHILUS INFLUENZAE B	0.98	1.33
HEPATITIS A	3.38	8.05
HEPATITIS B	3.20	3.19
MEASLES	0.53	0.0
MENINGOCOCCAL DISEASE	0.62	1.00
PERTUSSIS	9.59	10.26
SALMONELLOSIS	22.03	27.61
SHIGELLOSIS	4.62	3.72
TUBERCULOSIS	8.97	7.79

Table Six

AGE SPECIFIC RATES, SELECTED COMMUNICABLE DISEASES, 1990

RATE PER 100,000

DISEASE	AGE				
	<1-4	5-19	20-39	40-59	>=60
AMEBIASIS	5	2	7	3	2
CAMPYLOBACTERIOSIS	47	10	24	7	5
E.COLI.VEROTOXIN PROD.	22	5	3	2	2
GIARDIASIS	112	25	22	12	6
HAEMOPHILUS INFLUENZ.B	13	-	<1	-	<1
HEPATITIS A	3	10	12	4	1
HEPATITIS B	-	2	6	1	-
MEASLES	-	-	-	-	-
MENINGOCOCCAL DISEASE	6	1	-	-	1
PERTUSSIS	64	13	4	3	1
SALMONELLOSIS	75	19	33	18	16
SHIGELLOSIS	10	2	4	3	2
TUBERCULOSIS	6	1	8	8	14

Table Seven

CRUDE INCIDENCE RATE, SELECTED COMMUNICABLE DISEASES,
BY HEALTH REGION, 1990

RATE PER 100,000

DISEASE	HEALTH REGION								
	THOMPSON	WESTMAN	WPG SUB-DIV	INNER CITY	CENTRAL	EASTMAN	INTERLAKE	NORMAN	PARKLAND
AMEBIASIS	6.2	2.5	3.1	5.5	6.2	4.5	3.9	12.0	6.3
CAMPYLOBACTERIOSIS	4.2	34.0	10.6	17.0	24.1	14.8	13.3	8.1	14.7
E.COLI.VEROTOXIN PROD.	2.0	18.7	3.6	2.2	7.3	2.2	3.9	4.0	4.2
GIARDIASIS	38.0	79.0	9.6	16.0	43.0	11.0	8.0	28.0	59.0
HAEMOPHILUS INFLUENZ.B	8.3	<1	<1	1.8	2.0	1.1	-	8.0	-
HEPATITIS A	4.1	4.2	7.4	14.2	16.7	-	2.6	12.0	2.1
HEPATITIS B	-	1.7	1.9	9.1	1.0	3.4	2.6	-	2.1
MEASLES	-	-	-	-	-	-	-	-	-
MENINGOCOCCAL DISEASE	6.2	<1	<1	1.3	-	-	-	8.0	-
PERTUSSIS	6.2	11.9	10.3	8.2	12.5	2.2	6.6	-	40.0
SALMONELLOSIS	24.9	47.6	28.4	30.7	18.8	11.4	2.6	36.2	10.5
SHIGELLOSIS	8.3	11.9	1.7	1.3	4.1	1.1	-	-	14.7
TUBERCULOSIS	20.8	5.9	4.8	17.4	3.1	5.7	-	16.1	2.1

Figure 1

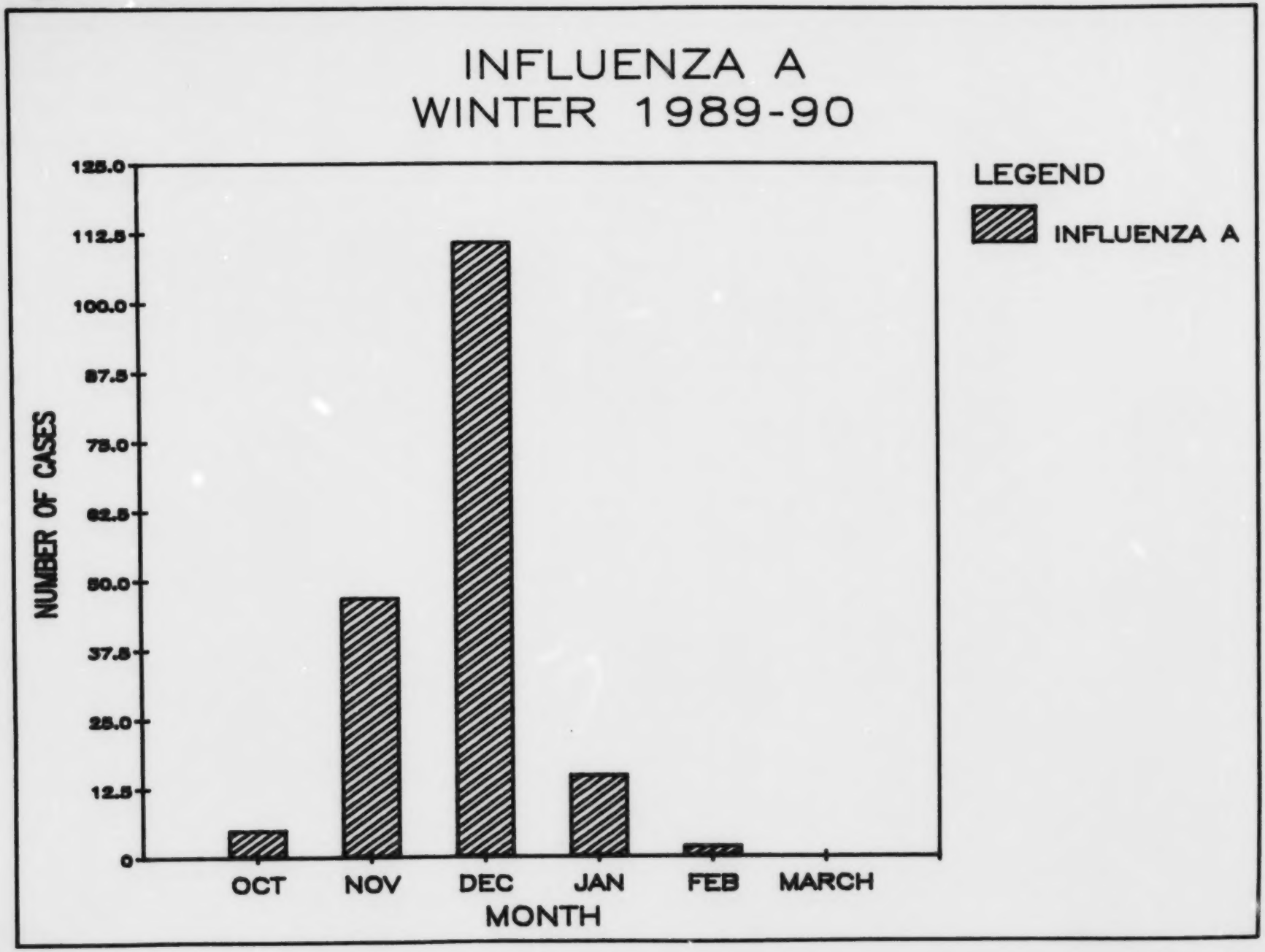

INFLUENZA A
WINTER 1989-90
NUMBER OF CASES
125.0
112.5
100.0
87.5
75.0
62.5
50.0
37.5
25.0
12.5
0
OCT
NOV
DEC
JAN
FEB
MARCH
MONTH
LEGEND
INFLUENZA A

Figure 2 **1990 VACCINE DISTRIBUTION IN MANITOBA**
(April 1, 1990 - March 31, 1991)

ITEM	DOSE PER UNIT	TOTAL # UNITS DISTRIB.	TOTAL # DOSES DISTRIB.
BED (Tetanus Toxoid)	5.0	6	30
BOARD (Tetanus Toxoid)	10.0	0	0
BROWN (Diphtheria Antitoxin)	1.0	13	13
BUD (Typhoid)	10.0	25	250
COMET (Diphtheria Toxoid)	25.0	7	175
DAB (Dpt Adsorbed)	5.0	3068	15340
DALE (Dpt polio absorbed)	5.0	34	170
DASH (Dpt Adsorbed)	10.0	9066	90660
FENCE (Oral Polio)	10.0	7348	73480
LAWN (Diptheria-Tetanus)	10.0	1257	12570
LIGHT (Diptheria Toxoid-reactors)	5.0	31	155
MENOTET (Meningococcal)	10.0	78	780
METEOR (Td Polio Adsorbed)	5.0	48	240
PEAT (Diphtheria-Tetanus)	5.0	633	3165
PREPOST (Rabies)	1.0	572	572
RIG (Rabies Immune Globulin)	0.2	283	56.6
ROSE (Typhoid)	20.0	320	6400
SCREEN (Diphtheria Toxin)	4.0	6	24
SINGLE (Measles)	1.0	20	20
SOLE (Rubella)	1.0	6386	6386
SOLID (Diphteria-Tetanus)	10.0	3476	34760
SOUND (Diphteria-Tetanus)	5.0	5991	29955
STAR (Diphtheria Fluid)	3.0	57	171
TWIST (Tetanus Immune Globulin)	0.5	33	16.5
VICTOR (Cholera)	5.0	80	400
VIBRIO (Cholera)	20.0	181	3620
WHOOP (Pertussis)	5.0	30	150
WIRE (Oral Polio)	10.0	5339	53390
OCEAN (Poliomyelitis)	5.0	503	2515
MMRII (Measles Mumps Rubella)	10.0	3386	33860
BOND (Botulism Anitoxin)	1.0	0	0
WHOLE (Fluzone Adult)	10.0	10276	102760
SPLIT (Fluzone Pediatric)	10.0	444	4440
HBV (Hepatitis B Vaccine 3ml	3.0	172	516
HBV (Hepatitis B Vaccine) .5ml	1.0	129	129
HBV (Hepatitis B Vaccine) 1ml	1.0	175	175
HBIG (Hept B Immune Globulin).5ml	1.0	65	65
HBIG (Hept B Immune Globulin) 5ml	1.0	25	25
GAMASTAN (Immune Serum Globulin)	10ml	919	3676
	5ml	2	2
	2ml	103	103
(Botulinus Antitoxin)	5.0	0	0
Pneumovax	5.0	30	150
Yellow Fever	1.0	200	200

Figure 3

VACCINE ADMINISTRATION 1990

VACCINE	TOTAL DOSES DISTRIBUTED	DOSES GIVEN TO CHILDREN
DPT	106,320	77,881
DT	15,936	3,811
OPV	126,870	72,866
MMR	33,860	17,103

Figure 4

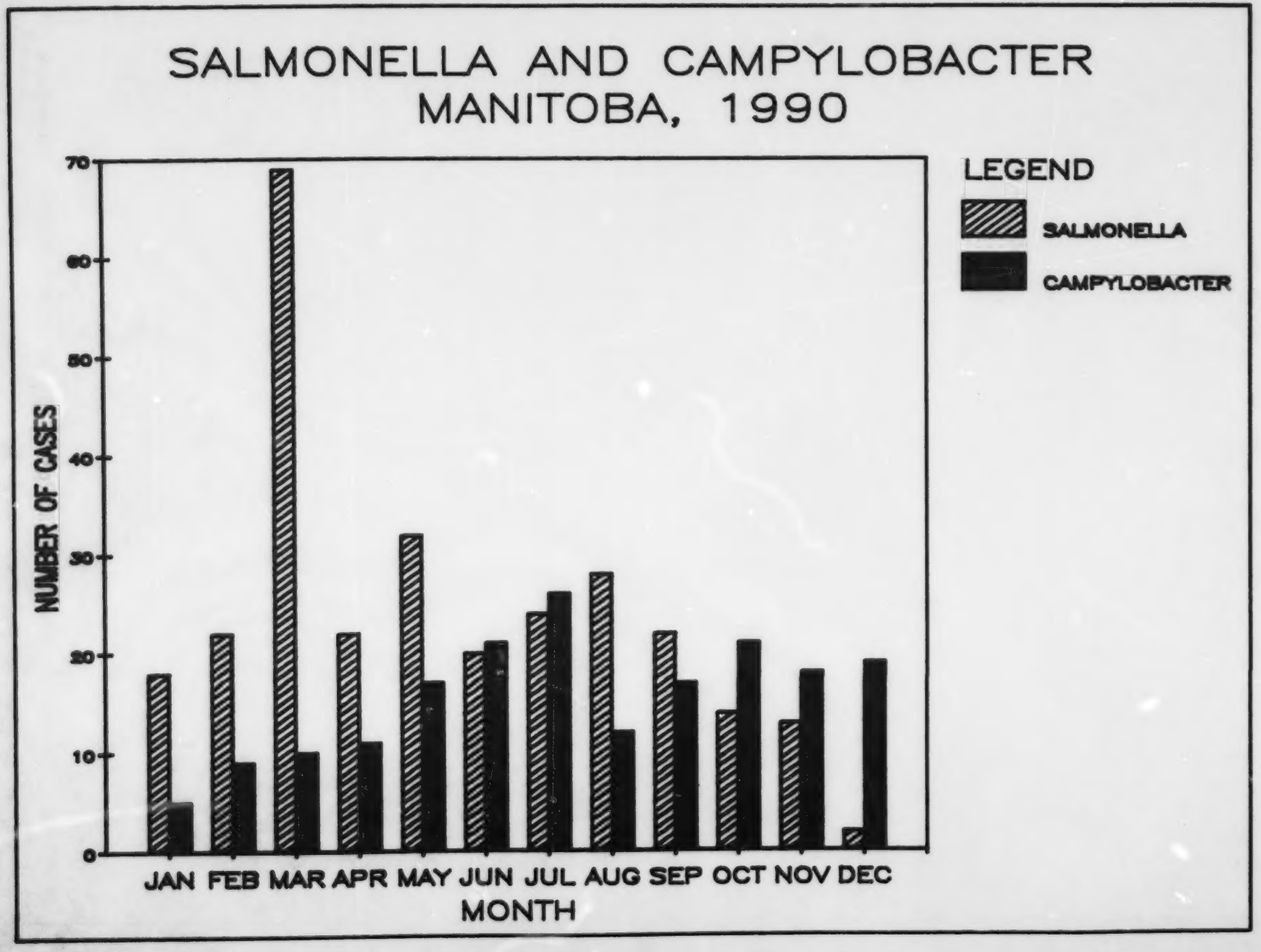

SALMONELLA AND CAMPYLOBACTER
MANITOBA, 1990
LEGEND
SALMONELLA
CAMPYLOBACTER
NUMBER OF CASES
0
10
20
30
40
50
60
70
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
MONTH

Figure 5

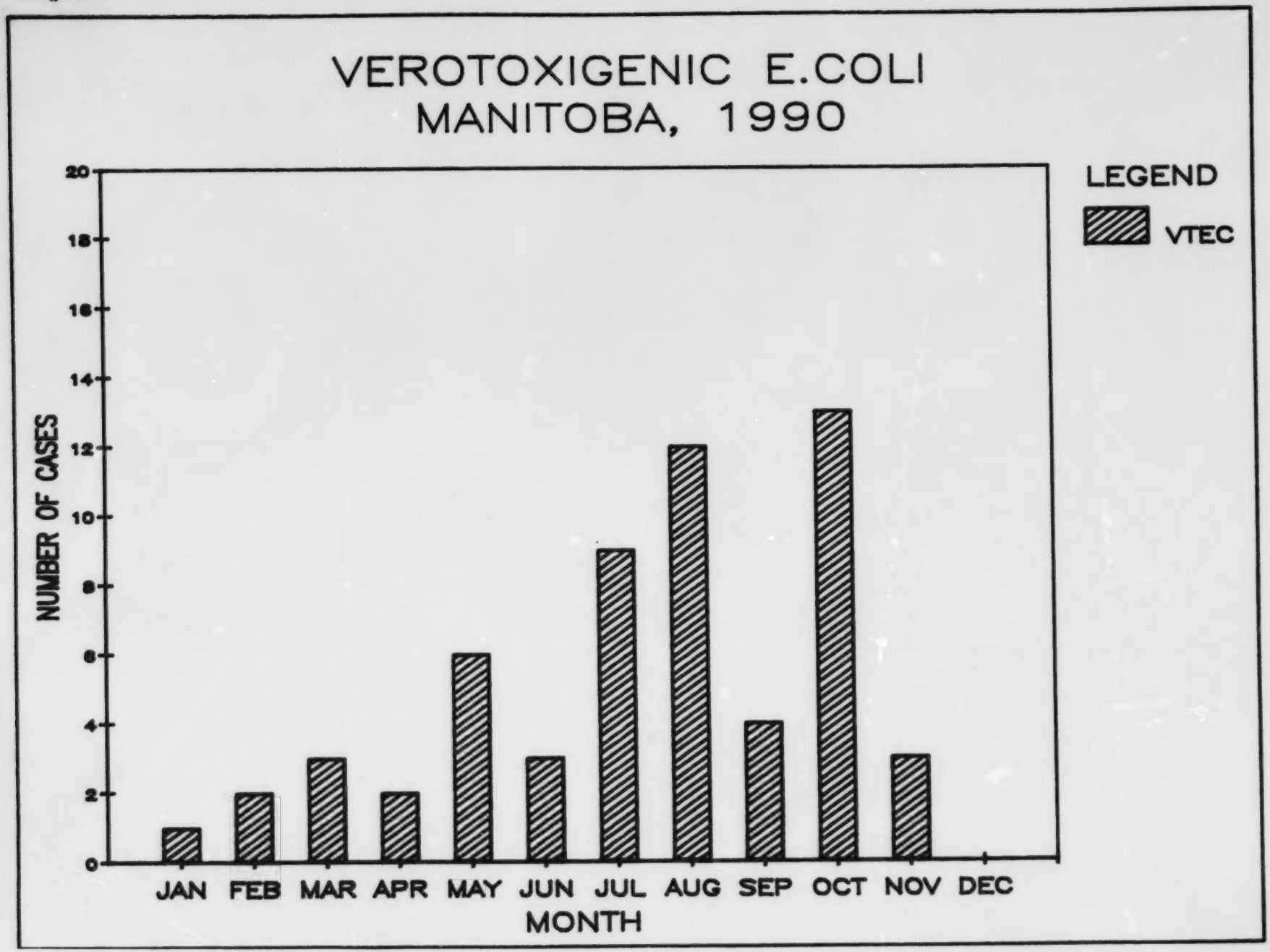

VEROTOXIGENIC E.COLI
MANITOBA, 1990
LEGEND
VTEC
NUMBER OF CASES
0
2
4
6
8
10
12
14
16
18
20
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
MONTH

Figure 6

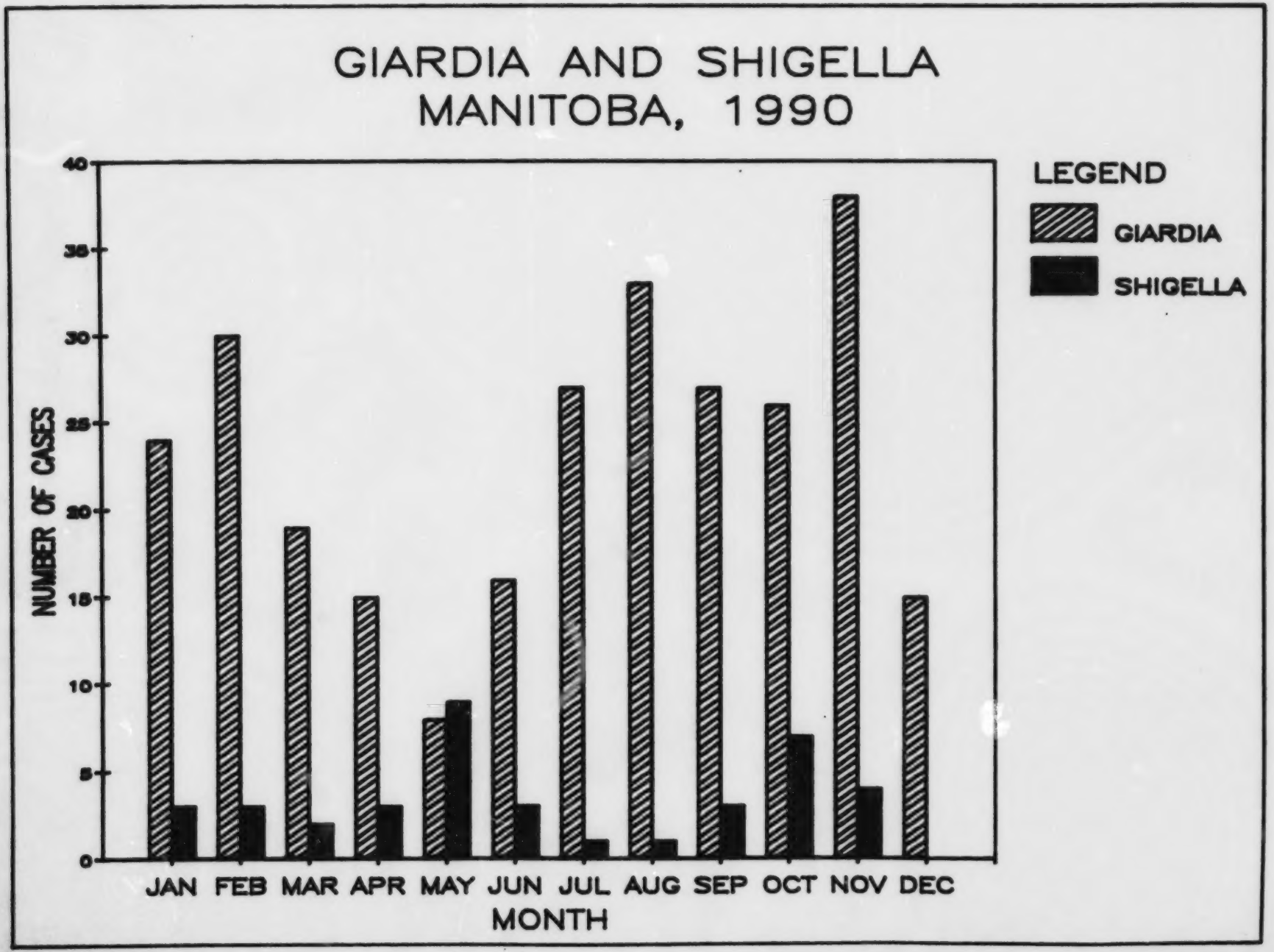
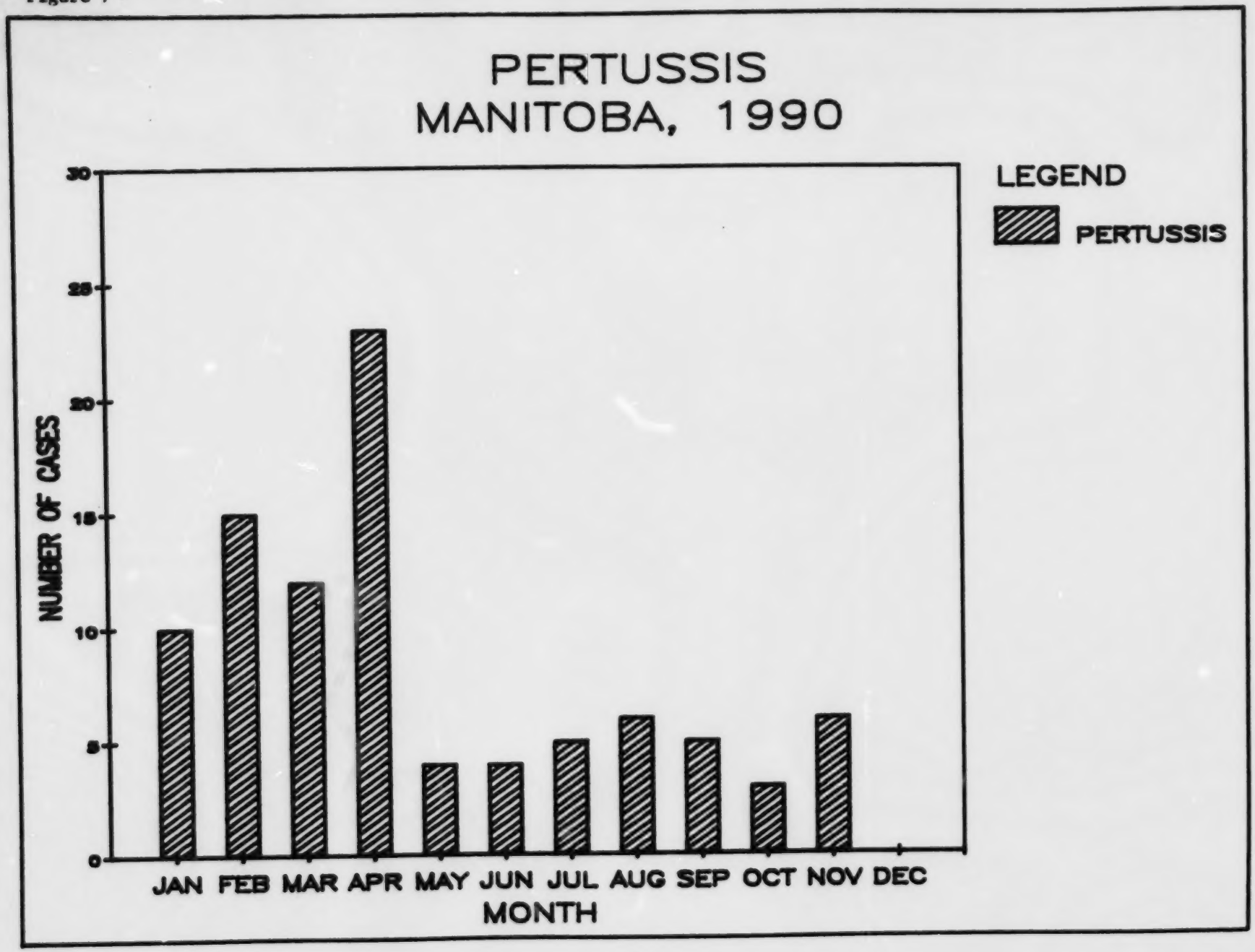
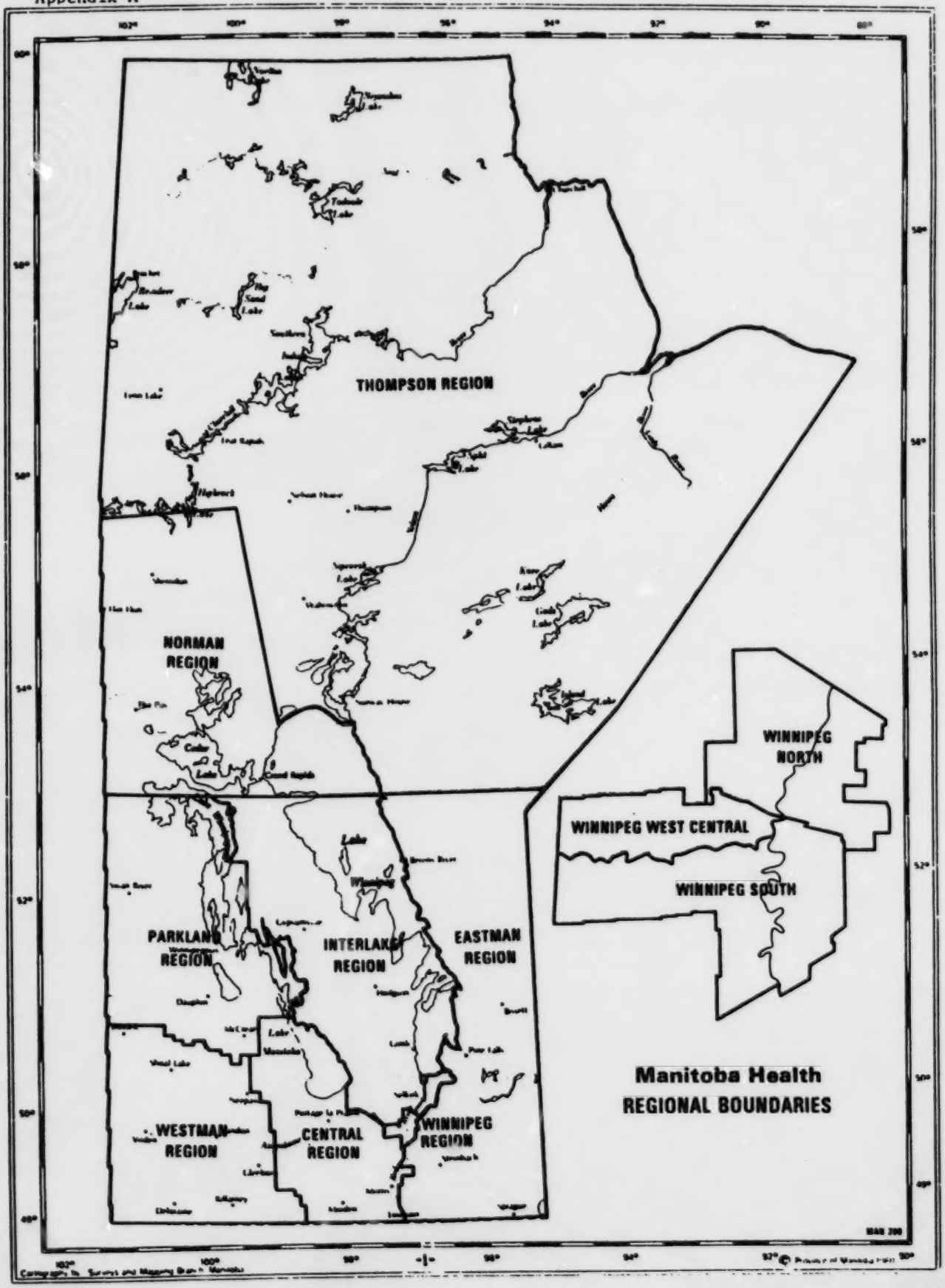

GIARDIA AND SHIGELLA
MANITOBA, 1990
LEGEND
GIARDIA
SHIGELLA
NUMBER OF CASES
0
5
10
15
20
25
30
35
40
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
MONTH

Figure 7


PERTUSSIS
MANITOBA, 1990
LEGEND
PERTUSSIS
NUMBER OF CASES
30
25
20
15
10
5
0
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
MONTH


THOMPSON REGION
NORMAN REGION
WINNIPEG NORTH
WINNIPEG WEST CENTRAL
WINNIPEG SOUTH
PARKLAND REGION
INTERLAKE REGION
EASTMAN REGION
WESTMAN REGION
CENTRAL REGION
WINNIPEG REGION
Manitoba Health
REGIONAL BOUNDARIES

Appendix B

Manitoba Population by Health Region[1], Sex, and Age Group,
June 1, 1990

Health Region/Sex	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total
Central									
Male	12,634	7,326	7,444	6,214	4,374	3,754	3,350	2,511	47,607
Female	11,989	6,868	7,315	5,898	4,283	3,942	3,891	3,514	47,700
Sub-Total	24,623	14,194	14,759	12,112	8,657	7,696	7,241	6,025	95,307
Eastman									
Male	11,997	7,065	7,327	6,324	4,314	3,426	2,610	1,645	44,708
Female	11,496	6,504	6,979	6,094	3,984	3,168	2,682	1,960	42,867
Sub-Total	23,493	13,569	14,306	12,418	8,298	6,594	5,292	3,605	87,575
Interlake									
Male	9,020	6,007	5,825	5,613	3,956	3,418	2,732	1,684	38,255
Female	8,350	5,387	5,742	5,386	3,757	3,284	2,863	2,125	36,894
Sub-Total	17,370	11,394	11,567	10,999	7,713	6,702	5,595	3,809	75,149
Norman									
Male	3,396	2,178	2,384	1,891	1,145	853	519	345	12,711
Female	3,282	2,160	2,206	1,650	1,077	747	565	443	12,130
Sub-Total	6,678	4,338	4,590	3,541	2,222	1,600	1,084	788	24,841
Parklands									
Male	5,522	3,585	3,186	3,062	2,382	2,356	2,351	1,698	24,102
Female	5,128	3,079	3,043	2,897	2,214	2,379	2,445	2,212	23,397
Sub-Total	10,650	6,644	6,229	5,959	4,576	4,735	4,796	3,910	47,499
Thompson									
Male	8,725	5,066	4,244	3,055	2,054	998	427	251	24,820
Female	8,186	4,818	4,191	2,856	1,654	817	413	252	23,187
Sub-Total	16,911	9,884	8,435	5,911	3,708	1,815	840	503	48,007
Westman									
Male	13,156	8,231	8,950	7,895	5,436	5,502	4,992	3,828	57,990
Female	12,500	7,814	8,987	7,694	5,581	5,520	5,887	5,558	59,541
Sub-Total	25,656	16,045	17,937	15,589	11,017	11,022	10,879	9,386	117,531
Winnipeg									
Male	63,922	46,943	60,610	48,484	30,902	25,910	20,066	12,106	308,843
Female	60,897	47,003	59,240	49,644	31,506	28,325	26,957	22,421	325,993
Sub-Total	124,819	93,946	119,850	98,128	62,408	54,235	47,023	34,527	634,936
Manitoba									
Male	128,372	86,381	99,970	82,538	54,543	46,217	37,017	24,068	559,136
Female	121,828	83,633	97,703	82,119	54,056	48,182	45,703	38,485	571,709
Total	250,200	170,014	197,673	164,657	108,599	94,399	82,750	62,553	1,130,845

(1) Regional boundaries revised effective April 1, 1989. See Introduction to Statistical Section.

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II. SUMMARY OF SEXUALLY TRANSMITTED DISEASES, HUMAN IMMUNODEFICIENCY VIRUS AND ACQUIRED IMMUNODEFICIENCY VIRUS

In 1990, a total of 5559 cases of chlamydia, gonorrhea and syphilis were reported. This represents a total decrease of 1570 cases (28%) of reported sexually transmitted diseases from 1989.

CHLAMYDIA:

- 4466 laboratory confirmed cases of genital chlamydia were reported in 1990. This represents a 25% decrease (1097 cases) from 1989.
- 74% of the infections were in women; 76% of these were in the age group 15-39 years.
- There were 72 women (2.1%) diagnosed as having PID at the time chlamydia was detected.
- Males make up 26% of the reported chlamydial infections; 65% of the cases occurred in the age group 15-24 years.
- There were nine males diagnosed as having epididymitis.
- There were seven children under the age of 12 who were found to have genital chlamydia. Six of these were investigated as cases of sexual abuse; one female was sexually active.
- There were six children under the age of one who had positive chlamydia test results from the eye and four with positive nasopharynx results. One child was diagnosed as having chlamydial pneumonia. These children are markers for infection in the mothers.
- There were a total of 169 women who had concomitant gonococcal and chlamydial infection. One of three women with gonorrhea also had chlamydia; one out of every 15 women who has chlamydia also had gonorrhea. In the males, one out of every five males with gonorrhea were found to have chlamydia; one out of every 11 males with chlamydia also has gonorrhea.

SYPHILIS:

- There were only 13 cases of syphilis reported for the year; only two of those cases were considered to be infectious.

GONORRHEA:

- 1080 laboratory confirmed cases of gonorrhea were reported in 1990. This represents a 42% decrease (453 cases) from 1989.

- Females make up 48% of all reportable gonorrhea; 69% of these cases occurred in women between the ages of 15-24 years.

- 3% of women who had cervical gonorrhea in the age group 15-39 were diagnosed as having pelvic inflammatory disease (14 cases).

- Males make up 52% of all reportable gonorrhea; 59% of these cases occurred in males between the ages of 15-24 years.

- There were four children under the age of 12 who were reported as having gonorrhea. Two of these were investigated as potential sexual abuse cases; two were neonates exposed to maternal infection during delivery.

- There were eight cases of penicillinase producing **Neisseria gonorrhoeae** (PRNG) reported in 1990. These were rigorously investigated and source of infection was found in all the cases to come from areas outside on Manitoba where there is a high incidence of resistant organisms. The laboratories continue to do beta lactamase testing on all positive cultures.

HIV INFECTIONS

Testing for antibodies to the Human Immunodeficiency Virus (HIV) first began in Manitoba in 1985. Blood specimens are submitted to the Cadham Provincial Laboratory with a requisition submitted in an non-nominal fashion, (i.e., in code).

The cumulative total of specimens submitted for testing from 1985 to the end of 1990 was 12479. Of these, 312 specimens were found to have antibodies to HIV. Males account for 4.1 percent of the cumulative total, while females account for 0.3 percent. The greatest number of positive test results were found in individuals between the ages of 20 and 29, followed by those 30 to 39.

1990 ANNUAL REPORT

In the last fiscal year, 3680 specimens were submitted for testing for antibodies to HIV to the Cadham Provincial Laboratory. In 1990, 44 were found to be seropositive (41 males and three females). The risk category classified homosexual/bisexual activity accounted for 31 or 75 percent of the total positives identified in 1990. Injection drug use, as a sole transmission factor, was noted in three of the 44 cases (two males, one female). Heterosexual transmission was reported in two individuals (one male and one female).

Eighty-six percent of those found to be infected were residents of Winnipeg while 14 percent stated their residence was outside of Winnipeg.

AIDS CASES 1990

In 1990, five persons were diagnosed with a case definition of AIDS. Three persons identified their risk factor as homosexual/bisexual activity; one, the sole-risk factor of injection drug use; and one is still under investigation. Three of the individuals were between the ages of 30 and 39; one, between 40 and 49 years; and one, 50 plus years. The primary diagnosis in each of these cases was reported as pneumocystis carinii pneumonia; two, Kaposi's sarcoma; one, other opportunistic infections, and one, HIV wasting syndrome.

TABLE 1: INCIDENCE RATES* OF CHLAMYDIA, GONORRHEA AND SYPHILIS

BY HEALTH REGION

MANITOBA 1990

Region	**Population	Chlamydia Cases	Rate	Gonorrhea Cases	Rate	Syphilis Cases	Rate	Total STD	Rate
Thompson	48,007	594	124	239	50			833	174
Central	95,307	100	10	21	2			121	13
Interlake	75,149	148	20	16	2			164	22
Parklands	47,499	107	23	17	4			124	26
Eastman	87,575	278	32	93	11			371	42
Norman	24,841	190	76	56	23			246	99
Westman	117,531	265	23	20	2	1		286	24
Winnipeg	634,936	2,716	43	610	10	12	<1	3,338	53
Out of Prov.		68		8				76	
TOTAL	1,130,845	4,466	39	1,080	10	13	<1	5,559	49

* Incidence rates expressed per 10,000 population.
** Population figures from MHSC registry, June 1990.

FIGURE 1

GONORRHEA IN MANITOBA 1990

RATE PER 10,000 POPULATION

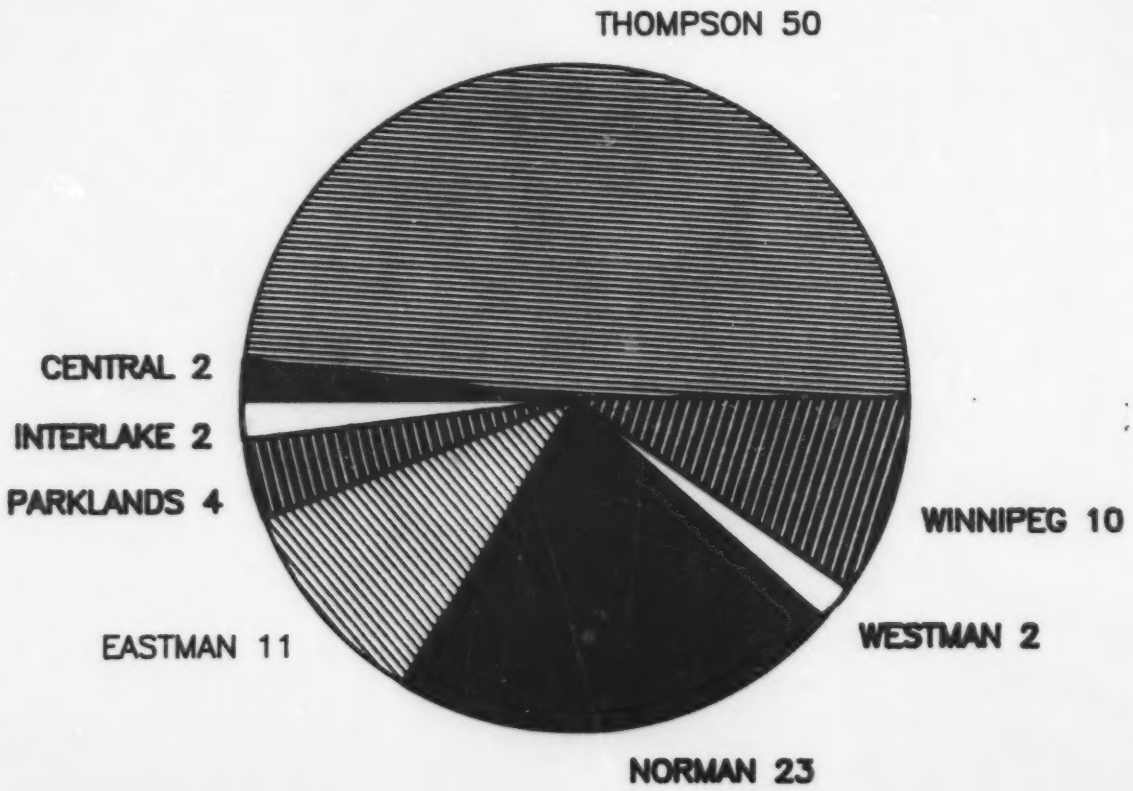


FIGURE 2

CHLAMYDIA IN MANITOBA 1990

RATE PER 10,000 POPULATION

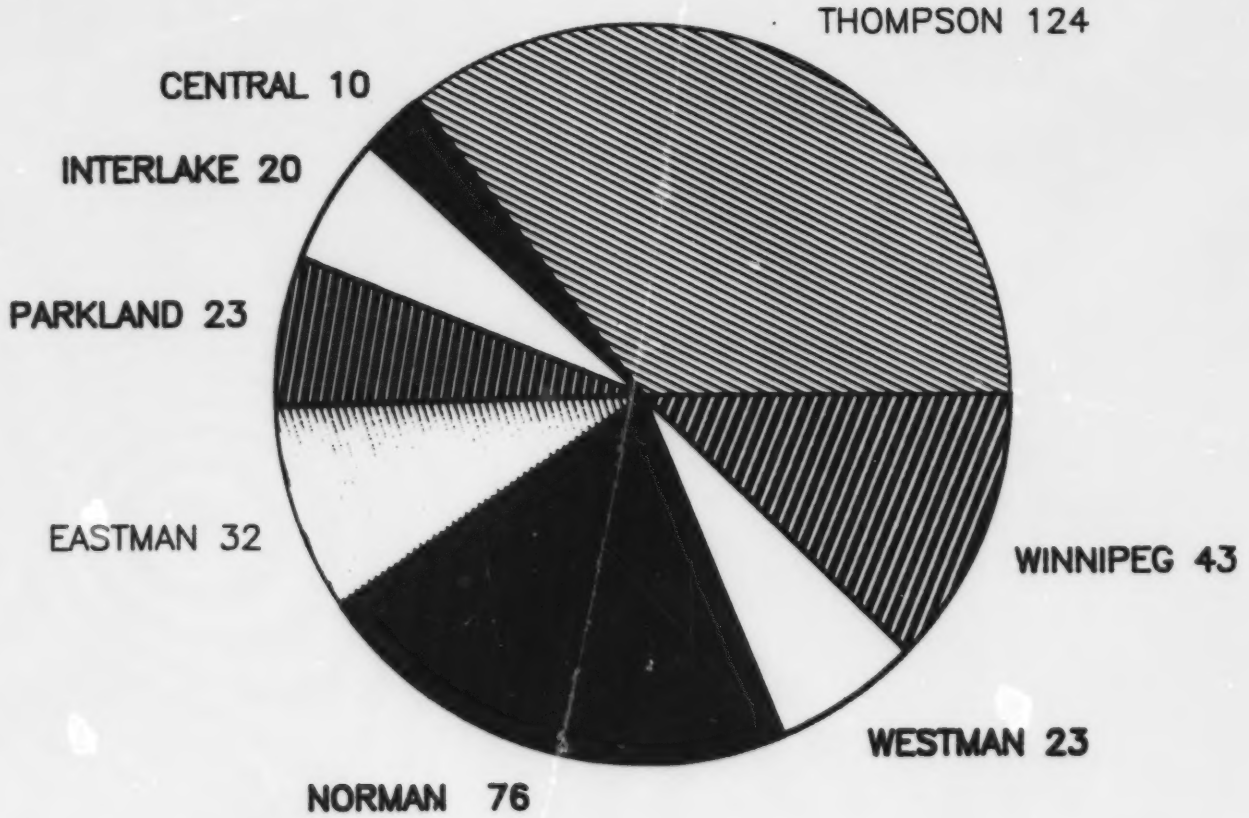


TABLE 1.1: INCIDENCE RATES* OF CHLAMYDIA AND GONORRHEA

BY SEX AND HEALTH REGION

MANITOBA 1990

	**Population		Chlamydia Cases		Rate		Gonorrhea Cases		Rate	
Region	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Thompson	23,187	24,820	447	147	193	59	101	138	44	56
Central	47,700	47,607	68	32	14	7	10	11	2	2
Interlake	36,894	38,255	111	37	30	10	9	7	2	2
Parklands	23,397	24,102	82	25	35	10	6	11	3	5
Eastman	42,867	44,708	202	76	47	17	37	56	9	13
Norman	12,130	12,711	143	47	118	37	33	23	27	18
Westman	59,541	57,990	187	78	31	13	9	11	2	2
Winnipeg	325,993	308,943	2011	705	62	23	308	302	9	10
Out of Prov			62	6			4	4		
TOTAL	571,709	559,136	3313	1153	58	21	517	563	9	10

* Incidence rates expressed per 10,000 population.
** Population figures from MHSC registry, June 1990.

TABLE 2.0: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES

BY AGE, SEX AND SITE OF INFECTION

MANITOBA 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA	1	1	1			1	30	2	223	150	147	180	61	112	39	86	7	20	6	7	2	4	517	563	1080
Sites:CX (PID)									(7)	(1)	(2)	(1)	(4)		(1)								(14)	(2)	
U (EPID)			1			1	28	2	215	149	143	175	61	110	38	86	7	20	6	7	1	4	500	554	1054
Throat	1						1		3		2	5		1									7	6	13
Rectum									5		1			1	1						1		8	1	9
Other		C1					B1			A1	A1												2	2	4
CHLAMYDIA			2		2		115	5	1412	296	1119	461	430	233	195	123	33	26	4	6	1	3	3313	1153	4466
Sites:CX (PID)									(38)	(3)	(21)	(5)	(10)	(1)	(2)		(1)						(72)	(9)	
U (EPID)			2		2		115	5	1412	296	1119	461	430	233	195	123	33	26	4	6	1	3	3313	1153	4466
*Gonorrhea/ Chlamydia							11		(3) 90	40	(1) 48	35	12	17	7	6	1					1	(4) 169	99	268
SYPHILIS												1			1	4	2	1		1	2	1	5	8	13
TOTAL	1	1	3	0	2	1	145	7	1635	446	1266	642	491	345	235	213	42	47	10	14	5	8	3835	1724	5559

KEY:
- * Gonorrhea/Chlamydia - indicates persons with concomitant gonococcal and chlamydial infections
- EPID - Epididymitis
- PID - Pelvic Inflammatory Disease
- U - Male Urethra
- Cx - Cervix
- Other: A - Arthritis
- B - Bartholin's abscess
- C - Eye

FIGURE 3

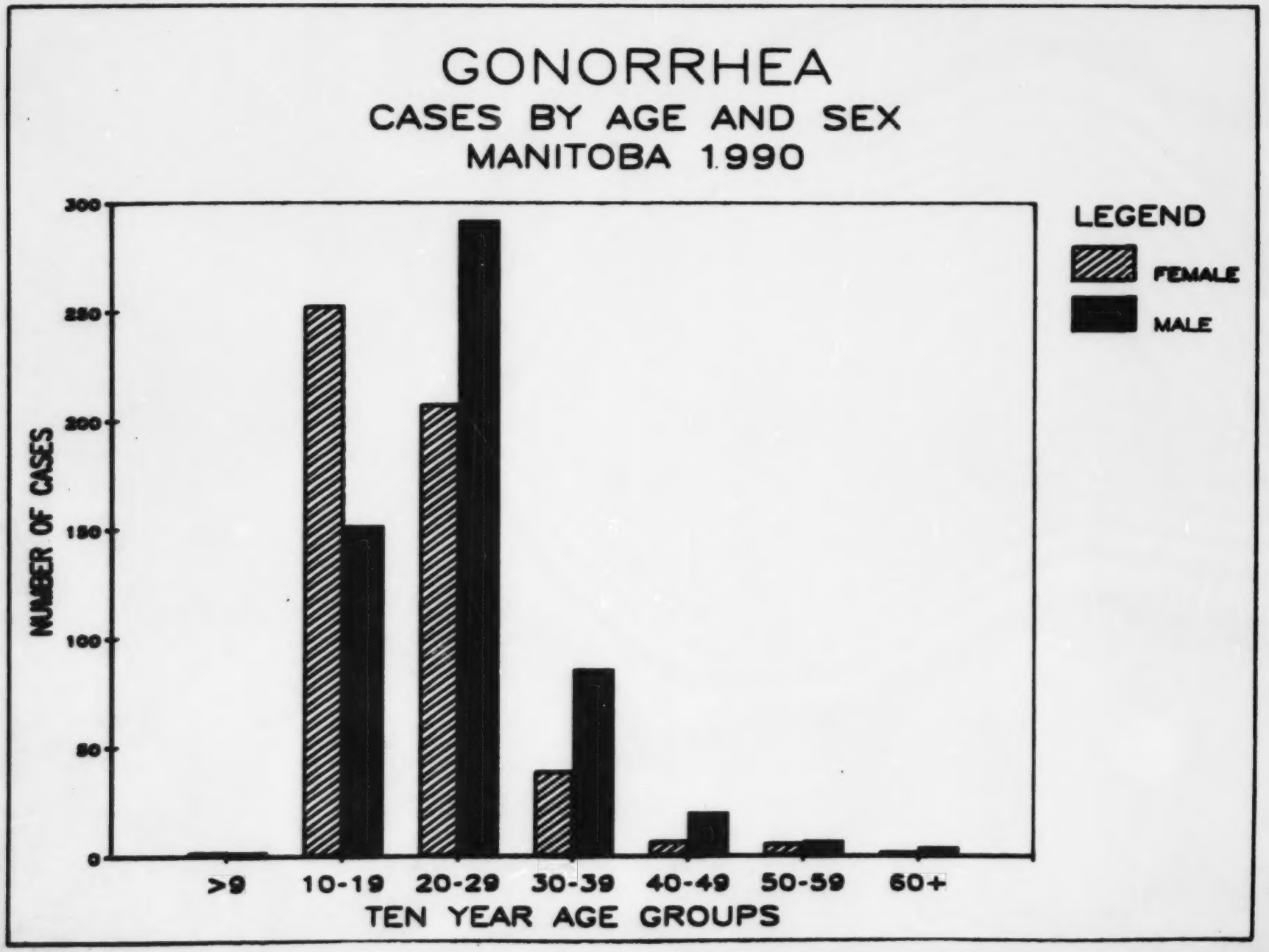

GONORRHEA
CASES BY AGE AND SEX
MANITOBA 1990
LEGEND
FEMALE
MALE
NUMBER OF CASES
300
250
200
150
100
50
0
>9
10-19
20-29
30-39
40-49
50-59
60+
TEN YEAR AGE GROUPS

FIGURE 4

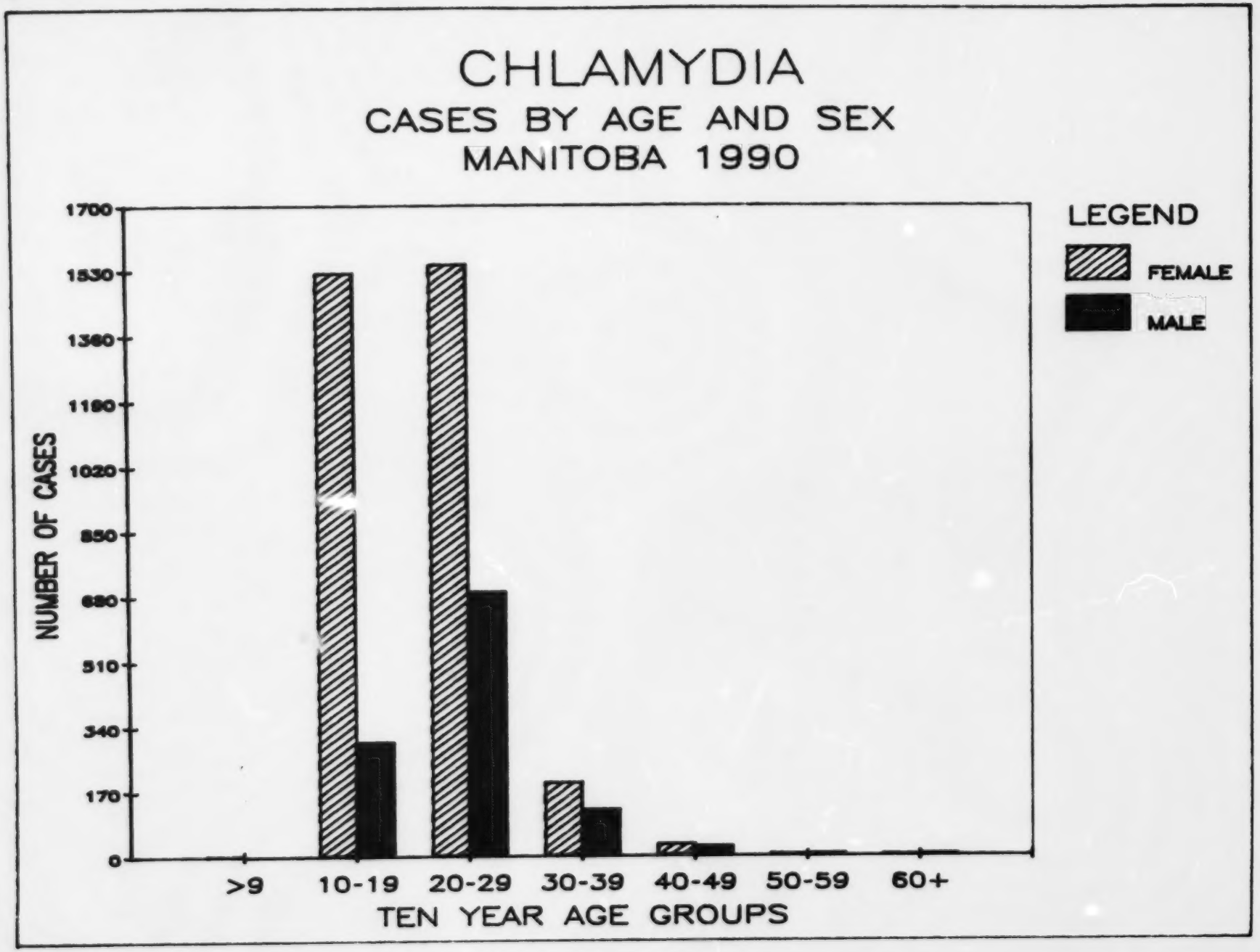

CHLAMYDIA
CASES BY AGE AND SEX
MANITOBA 1990
LEGEND
FEMALE
MALE
NUMBER OF CASES
1700
1530
1360
1190
1020
850
680
510
340
170
0
>9
10-19
20-29
30-39
40-49
50-59
60+
TEN YEAR AGE GROUPS

TABLE 2.1: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES

BY AGE, SEX AND SITE OF INFECTION

THOMPSON 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA							4	1	42	36	29	52	13	19	12	23		4	1	3			101	138	239
Sites:CX (PID) U (EPID)							4	1	(1) 42	36	29	(1) 52	13	19	11	23		4	1	3			(1) 100	(1) 138	238
Throat																									0
Rectum															1								1		1
Other																									0
CHLAMYDIA					2		17		211	47	143	53	48	31	22	10	2	5	2	1			447	147	594
Sites:CX (PID) U (EPID)					2		17		(8) 211	(1) 47	(2) 143	53	(2) 48	31	22	10	2	5	2	1			(12) 447	(1) 147	594
*Gonorrhea/ Chlamydia							2		17	7	10	10	1	3	2	1							32	21	53
SYPHILIS																									0
TOTAL	0	0	0	0	2	0	21	1	253	83	172	105	61	50	34	33	2	9	3	4	0	0	548	285	833

KEY:

*	Gonorrhea/Chlamydia	- indicates persons with concomitant gonococcal and chlamydial infections
EPID		- Epididymitis
PID		- Pelvic Inflammatory Disease
U		- Male Urethra
Cx		- Cervix
Other:	A	- Arthritis
	B	- Bartholin's abscess
	C	- Eye

TABLE 2.2: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES BY AGE, SEX AND SITE OF INFECTION

CENTRAL 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA									7	4	3	6				1							10	11	21
Sites:CX (PID) U (EPID)									7	4	3	6				1							10	11	21
Throat																									0
Rectum																									0
Other																									9
CHLAMYDIA							1	1	26	13	18	12	15	5	7			1	1				68	32	100
Sites:CX (PID) U (EPID)							1	1	26	13	(1) 18	12	(1) 15	5	7			1	1				(2) 68	32	100
*Gonorrhea/ Chlamydia									2	1													2	1	3
SYPHILIS																									0
TOTAL	0	0	0	0	0	0	1	1	33	17	21	18	15	5	7	1	0	1	1	0	0	0	78	43	121

KEY:

*	Gonorrhea/Chlamydia	- indicates persons with concomitant gonococcal and chlamydial infections
	EPID	- Epididymitis
	PID	- Pelvic Inflammatory Disease
	U	- Male Urethra
	Cx	- Cervix
	Other: A	- Arthritis
	B	- Bartholin's abscess
	C	- Eye

TABLE 2.3: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES

BY AGE, SEX AND SITE OF INFECTION

INTERLAKE 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA							1		4	1	3	2	1	3				1					9	7	16
Sites:CX (PID)																									
U (EPID)							1		4	1	3	2	1	3				1					9	7	16
Throat																									0
Rectum																									0
Other																									0
CHLAMYDIA			1				3		56	11	36	13	10	8	4	3	1	2					111	37	148
Sites:CX (PID)									(3)		(1)												(4)		
U (EPID)			1				3		56	11	36	13	10	8	4	3	1	2					111	37	148
*Gonorrhea/ Chlamydia							1		1		2	1	1	2									5	3	8
SYPHILIS																									0
TOTAL	0	0	1	0	0	0	4	0	60	12	39	15	11	11	4	3	1	3	0	0	0	0	120	44	164

KEY:
- * Gonorrhea/Chlamydia - indicates persons with concomitant gonococcal and chlamydial infections
- EPID - Epididymitis
- PID - Pelvic Inflammatory Disease
- U - Male Urethra
- Cx - Cervix
- Other: A - Arthritis
- B - Bartholin's abscess
- C - Eye

TABLE 2.4: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES BY AGE, SEX AND SITE OF INFECTION

PARKLANDS 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA									3	4	2	4	1	1		1		1					6	11	17
Sites:CX (PID) U (EPID)									3	4	2	4	1	1		1		1					6	11	17
Throat																									0
Rectum																									0
Other																									0
CHLAMYDIA							3		44	10	24	6	9	5	1	4	1						82	25	107
Sites:CX (PID) U (EPID)							3		(1) 44	10	(1) 24	6	9	5	1	4	1						(2) 82	25	107
*Gonorrhea/ Chlamydia									1	2	1												2	2	4
																									0
SYPHILIS																									
TOTAL	0	0	0	0	0	0	3	0	47	14	26	10	10	6	1	5	1	1	0	0	0	0	88	36	124

KEY:

*	Gonorrhea/Chlamydia	- indicates persons with concomitant gonococcal and chlamydial infections
	EPID	- Epididymitis
	PID	- Pelvic Inflammatory Disease
	U	- Male Urethra
	Cx	- Cervix
	Other: A	- Arthritis
	B	- Bartholin's abscess
	C	- Eye

TABLE 2.5: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES BY AGE, SEX AND SITE OF INFECTION

EASTMAN 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA							4		13	20	9	18	5	10	5	8					1		37	56	93
Sites:CX (PID)																									
U (EPID)							4		13	20	9	18	5	10	5	8					1		37	56	93
Throat																									0
Rectum																									0
Other																									0
CHLAMYDIA			1				8		89	21	66	30	26	15	9	8	3	2					202	76	278
Sites:CX (PID)									(2)		(2)	(1)	(2)										(6)	(1)	
U (EPID)			1				8		89	21	66	30	26	15	9	8	3	2					202	76	278
*Gonorrhea/ Chlamydia							1		3	4	5	5	1			1							10	10	20
SYPHILIS																									0
TOTAL	0	0	1	0	0	0	12	0	102	41	75	48	31	25	14	16	3	2	0	0	1	0	239	132	371

KEY:
- * Gonorrhea/Chlamydia - indicates persons with concomitant gonococcal and chlamydial infections
- EPID - Epididymitis
- PID - Pelvic Inflammatory Disease
- U - Male Urethra
- Cx - Cervix
- Other: A - Arthritis
- B - Bartholin's abscess
- C - Eye

TABLE 2.6: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES

BY AGE, SEX AND SITE OF INFECTION

NORMAN 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA							1		14	10	9	4	5	7	4	1		1					33	23	56
Sites:CX (PID)									(1)				(1)										(2)		
U (EPID)							1		14	10	9	3	5	7	4	1		1					33	22	55
Throat												1												1	1
Rectum																									0
Other																									0
CHLAMYDIA							6		69	14	47	18	17	10	4	5							143	47	190
Sites:CX (PID)																									
U (EPID)							6		69	14	47	18	17	10	4	5							143	47	190
*Gonorrhea/ Chlamydia									7	4	1		1	2		1							9	7	16
SYPHILIS																									0
TOTAL	0	0	0	0	0	0	7	0	83	24	56	22	22	17	8	6	0	1	0	0	0	0	176	70	246

KEY:

*	Gonorrhea/Chlamydia	- indicates persons with concomitant gonococcal and chlamydial infections
	EPID	- Epididymitis
	PID	- Pelvic Inflammatory Disease
	U	- Male Urethra
	Cx	- Cervix
	Other: A	- Arthritis
	B	- Bartholin's abscess
	C	- Eye

TABLE 2.7: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES

BY AGE, SEX AND SITE OF INFECTION

WESTMAN 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA									4	2	2	2	2	6	1							1	9	11	20
Sites:CX (PID)													(1)		(1)								(2)		
U (EPID)									4	2	2	2	2	6	1							1	9	11	20
Throat																									0
Rectum																									0
Other																									0
CHLAMYDIA							1		75	13	66	41	31	13	12	9	2	2					187	78	265
Sites:CX (PID)									(4)														(4)		
U (EPID)							1		75	13	66	41	31	13	12	9	2	2					187	78	265
*Gonorrhea/ Chlamydia									1				1	2									2	2	4
SYPHILIS																						1		1	1
TOTAL	0	0	0	0	0	0	1	0	79	15	68	43	33	19	13	9	2	2	0	0	0	2	196	90	286

KEY:
- * Gonorrhea/Chlamydia - indicates persons with concomitant gonococcal and chlamydial infections
- EPID - Epididymitis
- PID - Pelvic Inflammatory Disease
- U - Male Urethra
- Cx - Cervix
- Other: A - Arthritis
- B - Bartholin's abscess
- C - Eye

TABLE 2.8: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES

BY AGE, SEX AND SITE OF INFECTION

WINNIPEG 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA	1	1	1			1	19	1	135	73	89	90	34	66	17	50	7	13	4	4	1	3	308	302	610
Sites:CX (PID) U (EPID)			1			1	17	1	(4) 127	(1) 72	(2) 85	86	(2) 34	64	17	50	7	13	4	4		3	(8) 292	(1) 294	586
Throat	1						1		3		2	4		1									7	5	12
Rectum									5		1			1							1		7	1	8
Other		C1					B1			A1	A1												2	2	4
CHLAMYDIA							75	4	816	166	697	284	267	146	131	83	23	14	1	5	1	3	2011	705	2716
Sites:CX (PID) U (EPID)							75	4	(20) 816	(2) 166	(13) 697	(4) 284	(5) 267	(1) 146	(2) 131	83	(1) 23	14	1	5	1	3	(41) 2011	(7) 705	2716
*Gonorrhea/ Chlamydia							6		58	22	29	19	7	8	5	3	1					1	106	53	159
SYPHILIS												1			1	4	2	1		1	2		5	7	12
TOTAL	1	1	1	0	0	1	94	5	951	239	786	375	301	212	149	137	32	28	5	10	4	6	2324	1014	3338

KEY:
- * Gonorrhea/Chlamydia - indicates persons with concomitant gonococcal and chlamydial infections
- EPID - Epididymitis
- PID - Pelvic Inflammatory Disease
- U - Male Urethra
- Cx - Cervix
- Other: A - Arthritis
- B - Bartholin's abscess
- C - Eye

TABLE 2.9: DISTRIBUTION OF CHLAMYDIA, GONORRHEA AND SYPHILIS CASES

BY AGE, SEX AND SITE OF INFECTION

OUT OF PROVINCE 1990

AGE	under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 49		50 - 59		60+		TOTAL		TOTAL
SEX	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
GONORRHEA							1		1		1	2				2			1				4	4	8
Sites:CX (PID) U (EPID)							1		1		1	2				2			1				4	4	8
Throat																									0
Rectum																									0
Other																									0
CHLAMYDIA							1		26	1	22	4	7		5	1	1						62	6	68
Sites:CX (PID) U (EPID)							1		26	1	(1) 22	4	7		5	1	1						(1) 62	6	68
*Gonorrhea/ Chlamydia							1																1		1
SYPHILIS																									0
TOTAL	0	0	0	0	0	0	2	0	27	1	23	6	7	0	5	3	1	0	1	0	0	0	66	10	76

KEY:

*	Gonorrhea/Chlamydia	- indicates persons with concomitant gonococcal and chlamydial infections
	EPID	- Epididymitis
	PID	- Pelvic Inflammatory Disease
	U	- Male Urethra
	Cx	- Cervix
	Other: A	- Arthritis
	B	- Bartholin's abscess
	C	- Eye

TABLE 3.0: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

MANITOBA 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences	100	47	313	63	1	2	526
St. Boniface	3	5	56	4	1	3	72
Wpg. Private Physician	142	203	1522	604	2	2	2475
Rural Private Physician	90	109	670	239	1	1	1110
Mount Carmel	55	41	230	47			373
Klinic	9	1	31	7			48
Other Wpg. Hospitals	7	8	48	5			68
Out of Town Inst.			3				3
Federal Nursing	91	136	398	146			771
Jails	16	10	24	23			73
Other *	4	3	18	15			40
Total	517	563	3313	1153	5	8	5559

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics, Canadian Armed Forces, etc.

TABLE 3.1: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

THOMPSON 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences	6		16	3			25
St. Boniface			3				3
Wpg. Private Physician		1	18	2			21
Rural Private Physician	31	44	145	46			266
Mount Carmel							0
Klinic							0
Other Wpg. Hospitals	1						1
Out of Town Inst.			1				1
Federal Nursing	61	89	258	94			502
Jails		1	2	2			5
Other *	2	3	4				9
Total	101	138	447	147	0	0	833

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics,Canadian Armed Forces, etc.

TABLE 3.2: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

CENTRAL 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences		1		1			2
St. Boniface							0
Wpg. Private Physician	2		12	8			22
Rural Private Physician	7	10	54	21			92
Mount Carmel							0
Klinic							0
Other Wpg. Hospitals			1				1
Out of Town Inst.							0
Federal Nursing							0
Jails	1		1	1			3
Other *				1			1
Total	10	11	68	32	0	0	121

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics, Canadian Armed Forces, etc.

TABLE 3.3: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

INTERLAKE 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences			2	1			3
St. Boniface							0
Wpg. Private Physician	2		31	9			42
Rural Private Physician	6	6	56	21			89
Mount Carmel			3	2			5
Klinic			1				1
Other Wpg. Hospitals		1		1			2
Out of Town Inst.							0
Federal Nursing	1		13	2			16
Jails			2				2
Other *			3	1			4
Total	9	7	111	37	0	0	164

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics, Canadian Armed Forces, etc.

TABLE 3.4: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

PARKLANDS 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences							0
St. Boniface		1					1
Wpg. Private Physician	2		12	3			17
Rural Private Physician	4	10	69	22			105
Mount Carmel			1				1
Klinic							0
Other Wpg. Hospitals							0
Out of Town Inst.							0
Federal Nursing							0
Jails							0
Other *							0
Total	6	11	82	25	0	0	124

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics, Canadian Armed Forces, etc.

TABLE 3.5: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

EASTMAN 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences	4	2	13				19
St. Boniface	1		9	1			11
Wpg. Private Physician	3	7	38	13			61
Rural Private Physician		2	30	16			48
Mount Carmel			2	3			5
Klinic	1		1				2
Other Wpg. Hospitals			1				1
Out of Town Inst.			1				1
Federal Nursing	27	45	107	43			222
Jails	1						1
Other *							0
Total	37	56	202	76	0	0	371

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics, Canadian Armed Forces, etc.

TABLE 3.6: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

NORMAN 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences		1	5	2			8
St. Boniface							0
Wpg. Private Physician	2		6	2			10
Rural Private Physician	28	22	118	41			209
Mount Carmel							0
Klinic							0
Other Wpg. Hospitals			1				1
Out of Town Inst.			1				1
Federal Nursing	1		6	2			9
Jails							0
Other *	2		6				8
Total	33	23	143	47	0	0	246

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics
Canadian Forces

TABLE 3.7: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

WESTMAN 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences			3				3
St. Boniface							0
Wpg. Private Physician		1	10	6			17
Rural Private Physician	9	10	172	63		1	255
Mount Carmel							0
Klinic							0
Other Wpg. Hospitals							0
Out of Town Inst.							0
Federal Nursing			1	2			3
Jails							0
Other *			1	7			8
Total	9	11	187	78	0	1	286

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics, Canadian Armed Forces, etc.

TABLE 3.8: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

WINNIPEG 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences	87	42	261	55	1	2	448
St. Boniface	2	4	43	3	1	3	56
Wpg. Private Physician	131	193	1357	557	2	2	2242
Rural Private Physician	4	3	18	8	1		34
Mount Carmel	55	41	224	42			362
Klinic	8	1	29	7			45
Other Wpg. Hospitals	6	7	44	4			61
Out of Town Inst.							0
Federal Nursing	1	2	12	3			18
Jails	14	9	19	20			62
Other *			4	6			10
Total	308	302	2011	705	5	7	3338

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics, Canadian Armed Forces, etc.

TABLE 3.9: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

OUT OF PROVINCE 1990

FACILITY	GONORRHEA		CHLAMYDIA		SYPHILIS		TOTAL
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	
Health Sciences	3	1	13	1			18
St. Boniface			1				1
Wpg. Private Physician		1	38	4			43
Rural Private Physician	1	2	8	1			12
Mount Carmel							0
Klinic							0
Other Wpg. Hospitals			1				1
Out of Town Inst.							0
Federal Nursing			1				1
Jails							0
Other *							0
Total	4	4	62	6	0	0	76

SUMMARY: This table indicates the facility at which patients were diagnosed with gonorrhea, chlamydia and syphilis.

* Other Community Health Clinics, Canadian Armed Forces, etc.

FIGURE 5

TOTAL SEXUALLY TRANSMITTED DISEASES
REPORTED GONORRHEA, CHLAMYDIA AND SYPHILIS
BY DIAGNOSTIC FACILITY
MANITOBA 1990

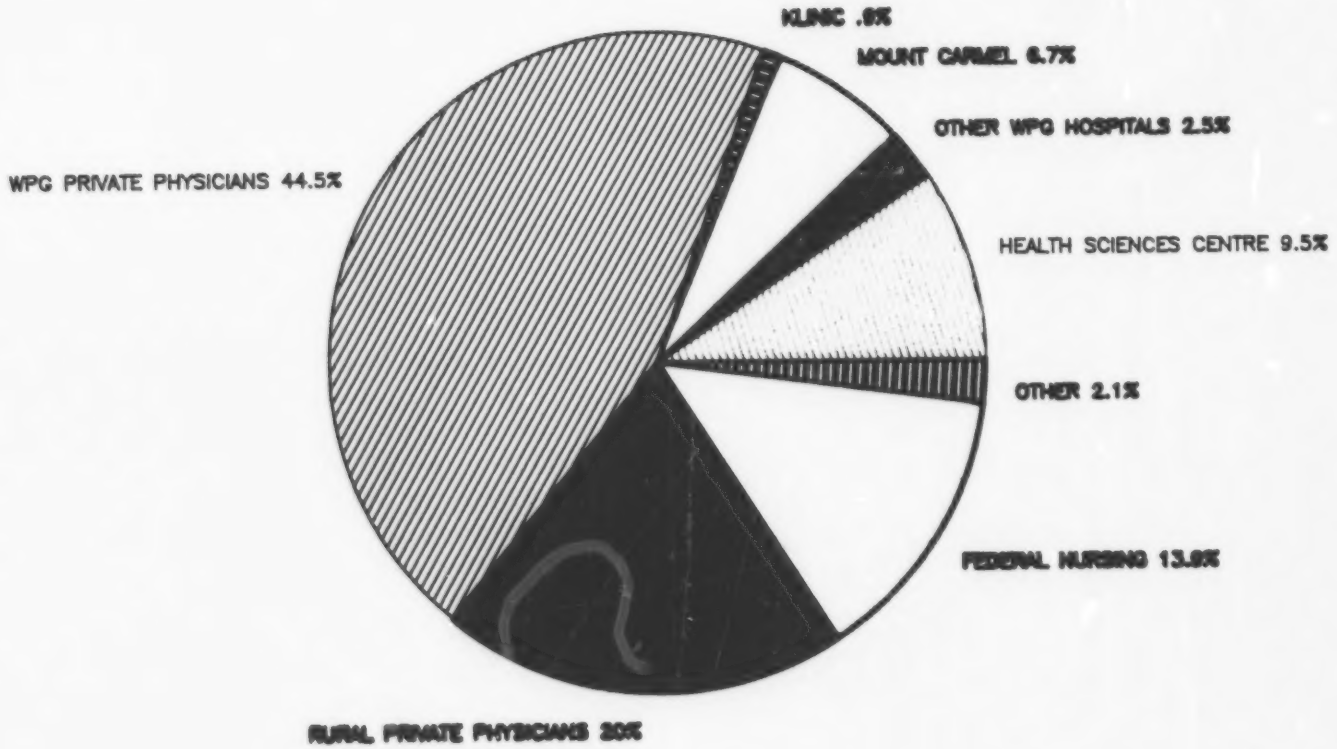


TABLE 4.0: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

WINNIPEG INNER CITY* 1990

FACILITY	GONORRHEA	CHLAMYDIA	SYPHILIS	TOTAL
Health Sciences Centre	76	179	1	256
St. Boniface	2	13	2	17
Wpg. Private Physician	156	594	3	753
Rural Private Physician	1	8		9
Mount Carmel Clinic	27	88		115
Klinic	9	23		32
Other Wpg. Hospitals	4	9		13
Out of Town Inst.				
Federal Nursing	1	7		8
Jails	17	20		37
Other		2		2
TOTAL	293	943	6	1242
% of Winnipeg Cases in this area of city	48%	35%	50%	37%

*Inner City = City Centre and Fort Rogue

TABLE 4.1: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

WINNIPEG ST. JAMES* 1990

FACILITY	GONORRHEA	CHLAMYDIA	SYPHILIS	TOTAL
Health Sciences Centre	8	20		28
St. Boniface		4		4
Wpg. Private Physician	21	407		428
Rural Private Physician	2	8		10
Mount Carmel Clinic	6	10		16
Klinic		6		6
Other Wpg. Hospitals	2	9		11
Out of Town Inst.				
Federal Nursing	1	2		3
Jails	3	14		17
Other		5		5
TOTAL	43	485		528
% of Winnipeg Cases in this area of city	7%	18%		16%

*St. James = St. James-Assiniboia, Assiniboine Park, Fort Garry.

TABLE 4.2: DISTRIBUTION OF GONORRHEA, CHLAMYDIA AND SYPHILIS CASES

BY DIAGNOSTIC FACILITY

WINNIPEG KILDONANS* 1990

FACILITY	GONORRHEA	CHLAMYDIA	SYPHILIS	TOTAL
Health Sciences Centre	45	117	2	164
St. Boniface	4	29	2	35
Wpg. Private Physician	147	913	1	1061
Rural Private Physician	4	10	1	15
Mount Carmel Clinic	63	168		231
Klinic		7		7
Other Wpg. Hospitals	7	30		37
Out of Town Inst.				
Federal Nursing	1	6		7
Jails	3	5		8
Other		3		3
TOTAL	274	1288	6	1568
% of Winnipeg Cases in this area of city	45%	47%	50%	47%

*Kildonans = Lord Selkirk, East/West Kildonan, Transcona, St. Boniface, St. Vital.

TABLE 5.0: TOTAL POSITIVE HIV ANTIBODY TESTS

BY AGE AND SEX

MANITOBA 1985 - 1990

AGE GROUP	1985		1986		1987		1988		1989		1990		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
0 - 14	0		2		2								4	0
15 - 19			1		2		3		2			1	8	1
20 - 29	1		41		18	1	16	2	24	3	13		113	6
30 - 39			17		21		13	2	24		23	2	98	4
40 - 49	1		5		3		4		7		4		24	0
50 +			4		5	2	2		2		1		14	2
TOTAL	2	0	70	0	51	3	38	4	59	3	41	3	261	13

TABLE 6.0: HIV ANTIBODY POSITIVE TESTS BY TRANSMISSION CATEGORY AND SEX MANITOBA 1990

TRANSMISSION CATEGORY	MALE	FEMALE	TOTAL
Homosexual/Bisexual Activity	31		31
Injection Drug Use	2	1	3
Both of the above	1		1
Recipient Blood/Blood Products	4	1	5
Heterosexual *	1	1	2
Perinatal			0
No Identified Risk	2		2
TOTAL	41	3	44

* Heterosexual activity includes (a) persons originating in or residing in countries with a high prevalence of HIV and where heterosexual transmission of HIV is common; and (b) persons reporting heterosexual activity with person(s) at risk of HIV infection.

FIGURE 6

HIV ANTIBODY POSITIVE TESTS

MANITOBA TOTAL 1990
TRANSMISSION SUMMARY

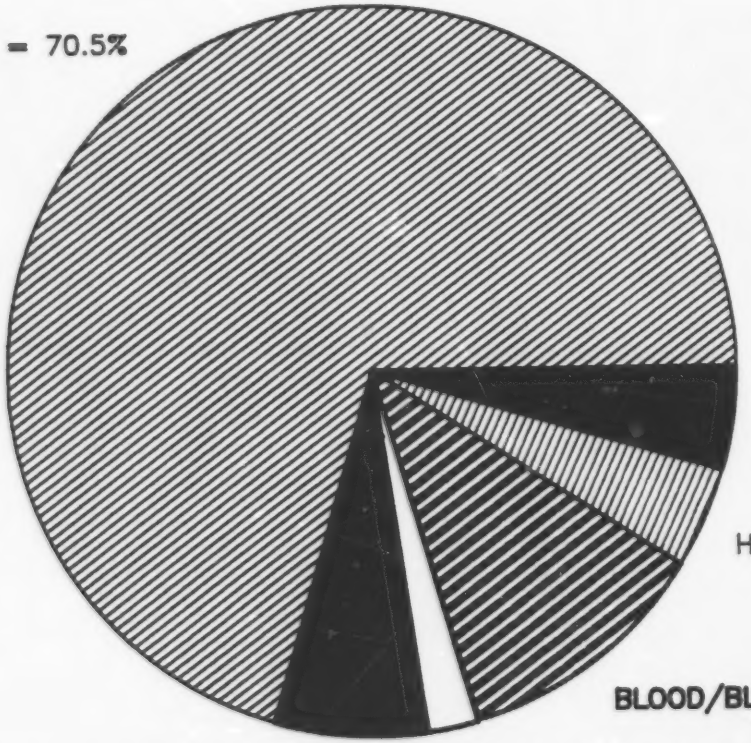
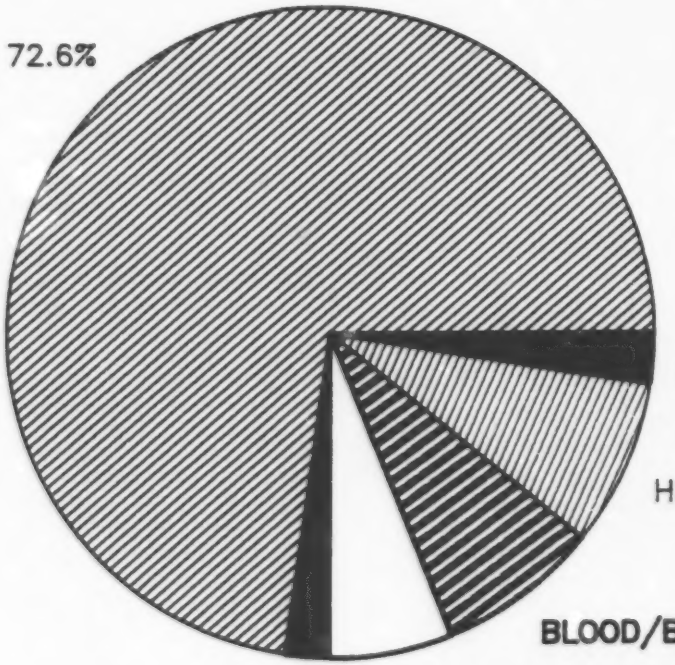

HOMOSEXUAL/BISEXUAL 31 = 70.5%
NO IDENTIFIED RISK 2 = 4.5%
HETEROSEXUAL 2 = 4.5%
BLOOD/BLOOD PRODUCTS 5 = 11.4%
HOMOSEXUAL/BISEXUAL/IDU 1 = 2.3%
INJECTION DRUG USE 3 = 6.8%

FIGURE 7

HIV ANTIBODY POSITIVE TESTS

MANITOBA TOTAL 1985 - 1990
TRANSMISSION SUMMARY



HOMOSEXUAL/BISEXUAL 199 = 72.6%

NO IDENTIFIED RISK 7 = 2.6%

HETEROSEXUAL 23 = 8.4%

BLOOD/BLOOD PRODUCTS 22 = 8%

INJECTION DRUG USE 6 = 2.2%

HOMOSEXUAL/BISEXUAL/IDU 17 = 6.2%

TABLE 7.0: HIV ANTIBODY POSITIVE TESTS BY GEOGRAPHIC RESIDENCE IN MANITOBA 1990

REGION	MALE	FEMALE	TOTAL
WINNIPEG	36	2	38
OUT OF WINNIPEG	5	1	6
OUT OF PROVINCE			0
UNKNOWN			0
TOTAL	41	3	44

NOTE: In order to ensure confidentiality, individual regions are not identified.

TABLE 8.0: AIDS CASES

BY YEAR OF DIAGNOSIS

MANITOBA 1985 - 1990

YEAR	CASES	DEATHS	CASE FATALITY (%)
1985	1	1	100
1986	15	4	31
1987	8	7	50
1988	5	5	59
1989	16	10	60
1990	5	9	72
TOTAL	50	36	70

TABLE 9.0: AIDS CASES

MANITOBA 1985 - 1990

	CASES REPORTED	DEATHS	ALIVE
MALES	49	35	14
FEMALES	1	1	0
TOTAL	50	36	14

TABLE 10.0: AIDS CASES

BY RISK FACTOR

MANITOBA 1985 - 1990

RISK FACTOR	1985	1986	1987	1988	1989	1990	TOTAL
Homosexual/Bisexual Activity	1	13	8	4	12	3	41
Injection Drug Use						1	1
Both Of The Above		2					2
Recipient of Blood/Blood Products				1	4		5
Heterosexual Activity *							0
Perinatal							0
No Identified Risk						1	1
TOTAL	1	15	8	5	16	5	50

* Heterosexual activity includes (a) persons originating in or residing in countries with a high prevalence of HIV and where heterosexual transmission of HIV is common; and (b) persons reporting heterosexual activity with person(s) at risk of HIV infection.

TABLE 11.0: AIDS CASES

BY AGE

MANITOBA 1985 - 1990

AGE GROUP	1990	1985 - 1990	% OF TOTAL
0 - 14			0
15 - 19			0
20 - 29		11	22
30 - 39	3	26	52
40 - 49	1	6	12
50 +	1	7	14
TOTAL	5	50	

TABLE 12.0: AIDS CASES

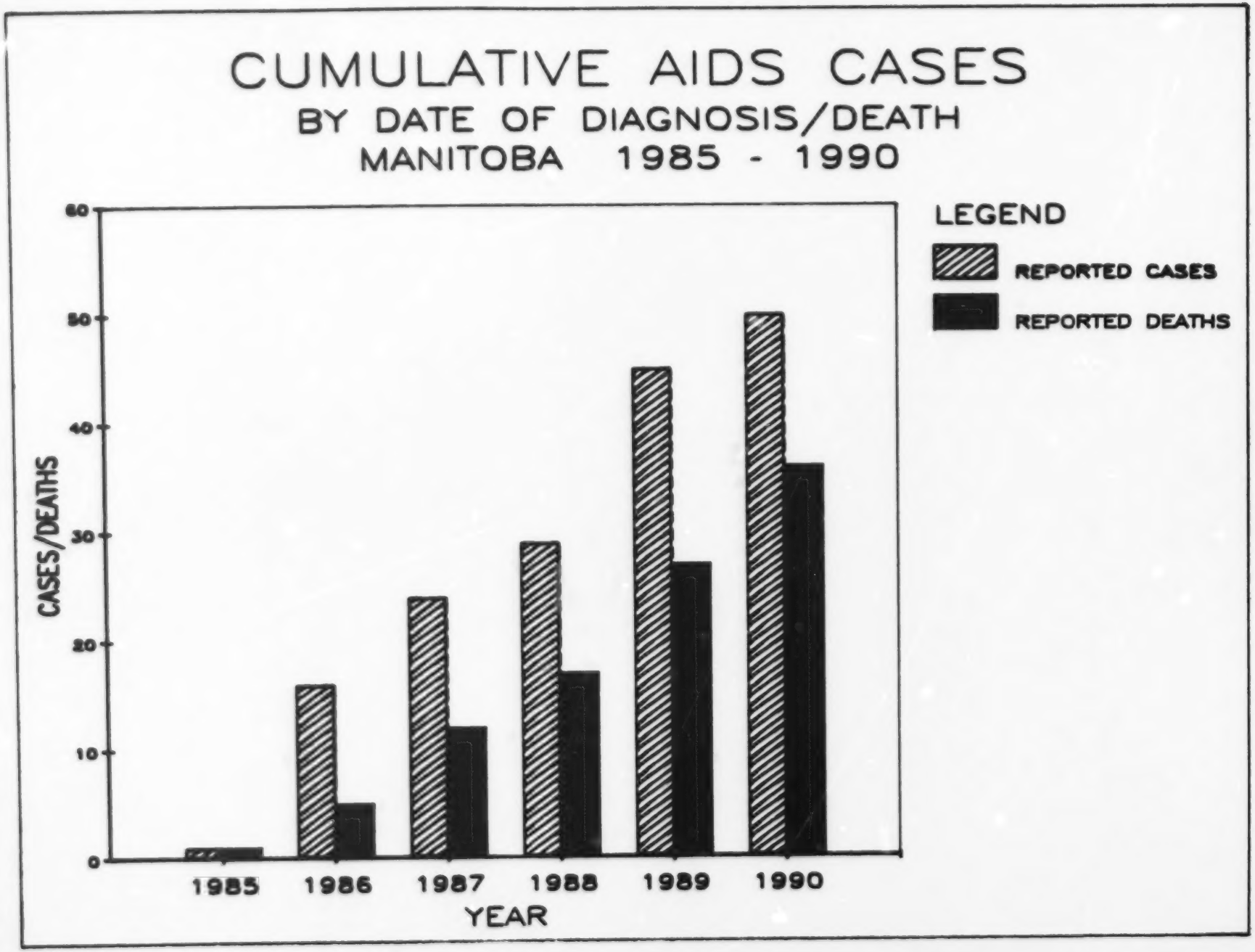
BY PRESENTATION

MANITOBA 1985 - 1990

PRIMARY DISEASE	CASES (1990)	CASES 1985 - 1990	PERCENT OF TOTAL (1990)	PERCENT OF TOTAL 1985 - 1990
PCP without K.S.	(2)	29	(40)	58
K.S. without PCP	(1)	6	(20)	12
Both PCP and K.S.	( )	1	( )	2
Other Opportunistic Diseases	(1)	8	(20)	16
Other Malignancies	( )	2	( )	4
HIV Wasting Syndrome	(1)	3	(20)	6
HIV Encephalopathy	( )	1	( )	2
TOTAL	(5)	50		

* ( ) denotes statistical data reported January 1 - December 31, 1990

FIGURE 8


CUMULATIVE AIDS CASES
BY DATE OF DIAGNOSIS/DEATH
MANITOBA 1985 - 1990
LEGEND
REPORTED CASES
REPORTED DEATHS
CASES/DEATHS
0
10
20
30
40
50
60
1985
1986
1987
1988
1989
1990
YEAR

COMPLICATIONS IN WOMEN

Multiple organisms, most commonly **Neisseria gonorrhoea** and **Chlamydia trachomatis** have been implicated as etiologic agents in pelvic inflammatory disease (PID). In some studies the gonococcus has been isolated in up to 85 percent of women who have acute PID. The number of women who have gonorrhea at the time of PID diagnosis has increased, plateaued, and decreased proportionately to the incidence of gonorrhea.

It is well documented that ectopic pregnancy is a late complication of PID. Women who have chlamydial PID are often asymptomatic or have mild symptoms and, therefore, tend to receive treatment later in their course of illness. This type of chronic tubal infection may predispose women to tubal pregnancy. Some studies show that patients with a history of ectopic pregnancy frequently have antibodies to **C. trachomatis**.

Based on this information, data on the incidence of PID, uterine infection and ectopic pregnancy were reviewed and compared to data on the incidence of gonococcal and chlamydial infections in Manitoba. Information regarding the diagnosis of PID, uterine infections and ectopic pregnancies (international classification of diseases with code numbers of 614, 615 and 633 respectively) as reported by attending physicians was obtained from Manitoba Health Services Commission (MHSC). The data regarding gonorrhea and chlamydia infections were obtained from the Health Promotion, Protection and Disease Prevention office (formerly STD Control) and is based on reported laboratory-confirmed infections in Manitoba.

There were some differences in the two data bases that require an explanation at the outset:

1. MHSC uses a fiscal year and STD Control uses a calender year in collecting their statistics. Therefore, we are comparing years that are January-December (STD) and April-March (MHSC).

2. In the MHSC data the numbers do not represent individuals but rather the number of patient visits.

3. Although data presented are from 1984 - 1990, chlamydia did not become a reportable infection until 1987 and, therefore, reliable numbers prior to that time are not available.

In reviewing these data it appears that ectopic pregnancies continue to rise in numbers each year and the costs of caring for these individuals continue to rise. Recent studies show that women who have a history of PID have a 7 to 10 fold increased risk of ectopic pregnancy as compared with women who never had PID. In order to prevent the late sequelae of PID, the STDs that cause PID must be controlled.

Therefore, public health prevention efforts involving education programs, testing individuals involved in high-risk activities and contact tracing programs must continue. Silent or chronic PID is probably one of the reasons that the number of ectopic pregnancies is continuing to rise and efforts, especially in chlamydia control, must be continued.

The search for asymptomatic women through screening and contact tracing are effective methods of identifying early disease. Females access medical care for various reasons such as birth control, pregnancy and therapeutic abortions. This may explain the high rates for females to males (3:1) who have chlamydial infections. Some males who are tested as sexual partners of infected females are found to have negative results. This may be due to improper specimen collection. If new methods of testing males (first voided urine) prove to be more reliable we may be able to identify more asymptomatic men. In the meantime, we continue to test and treat all male partners of infected women in order to identify more male cases and prevent females from becoming reinfected.

FIGURE 9: Infections/Complications, Manitoba Females, 1984-1990

a) the reported incidence of chlamydia decreased from 1988 - 1990;
b) the incidence of gonorrhea decreased;
c) the number of physician visits related to a primary diagnosis of PID decreased;
d) the number of physician visits related to uterine infections as the primary diagnosis increased slightly; and
e) the number of ectopic pregnancies increased by 45 percent (225 cases in 1984 to 326 cases in 1990).

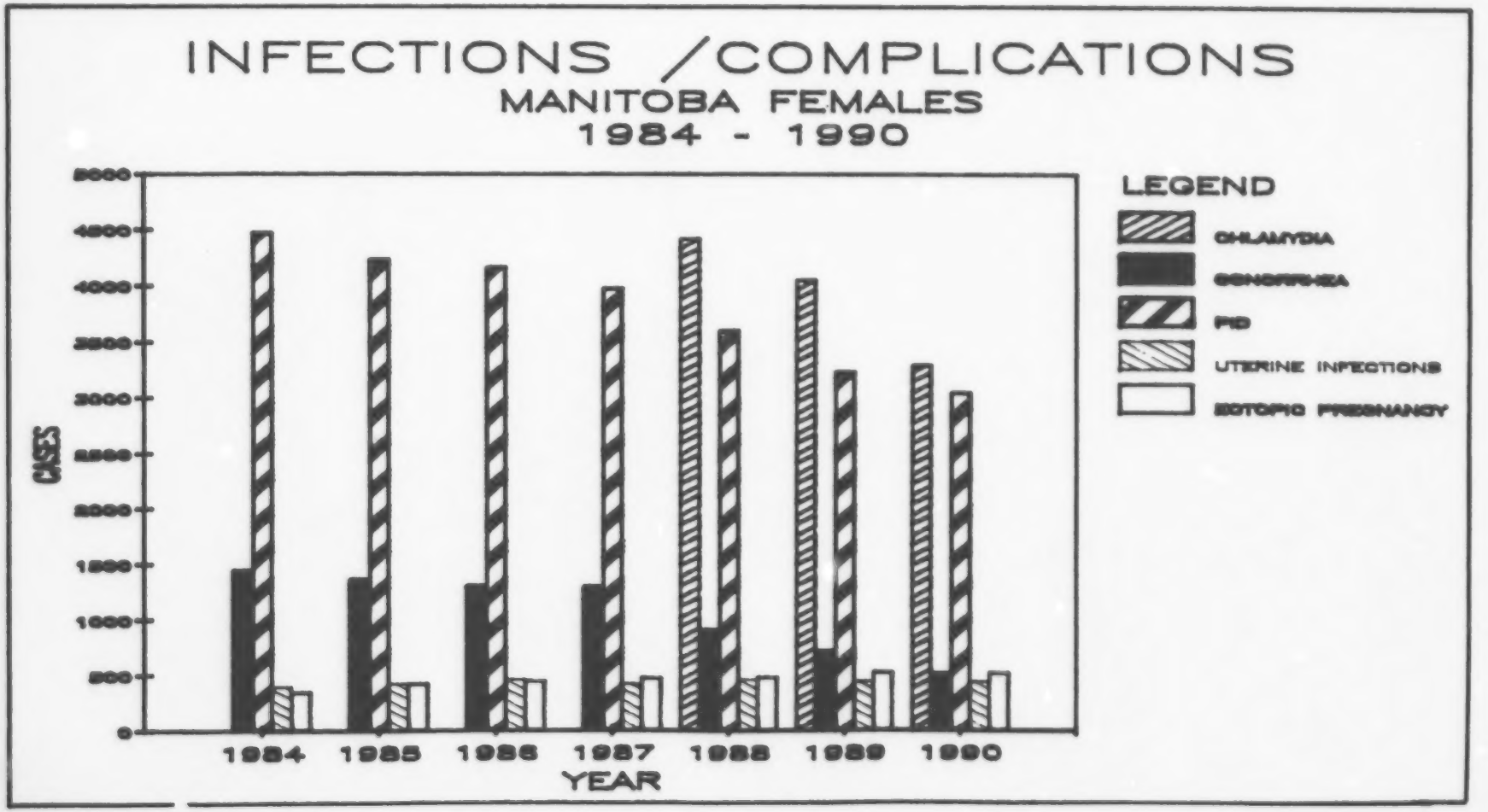


FIGURE 10: Costs of Complications, Manitoba Females, Outpatient Population 1984 - 1990

From 1984 - 1990 medical costs:

a) associated with PID decreased by 46 percent;
b) associated with uterine infections increased by 26 percent; and
c) associated with ectopic pregnancies increased by 69 percent.

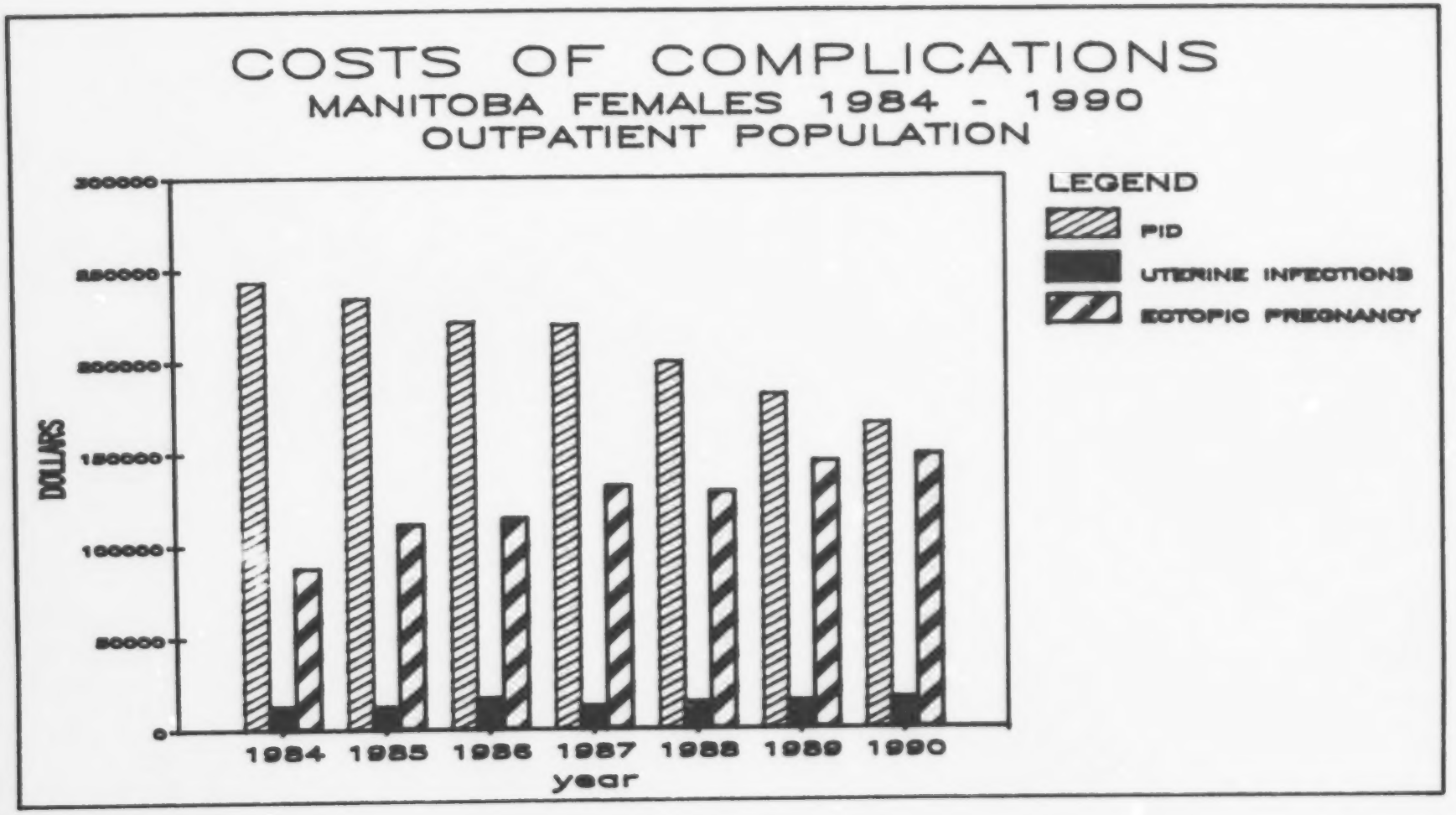


Figure 11: **Cases of Complications, Manitoba Females, Inpatient Population 1984 - 1990**

The number of women who were hospitalized between the years 1984 - 1990:

a) with a diagnosis of PID decreased by 58 percent;
b) with a diagnosis of uterine infection decreased by 42 percent; and
c) with a diagnosis of ectopic pregnancy increased by 45 percent.

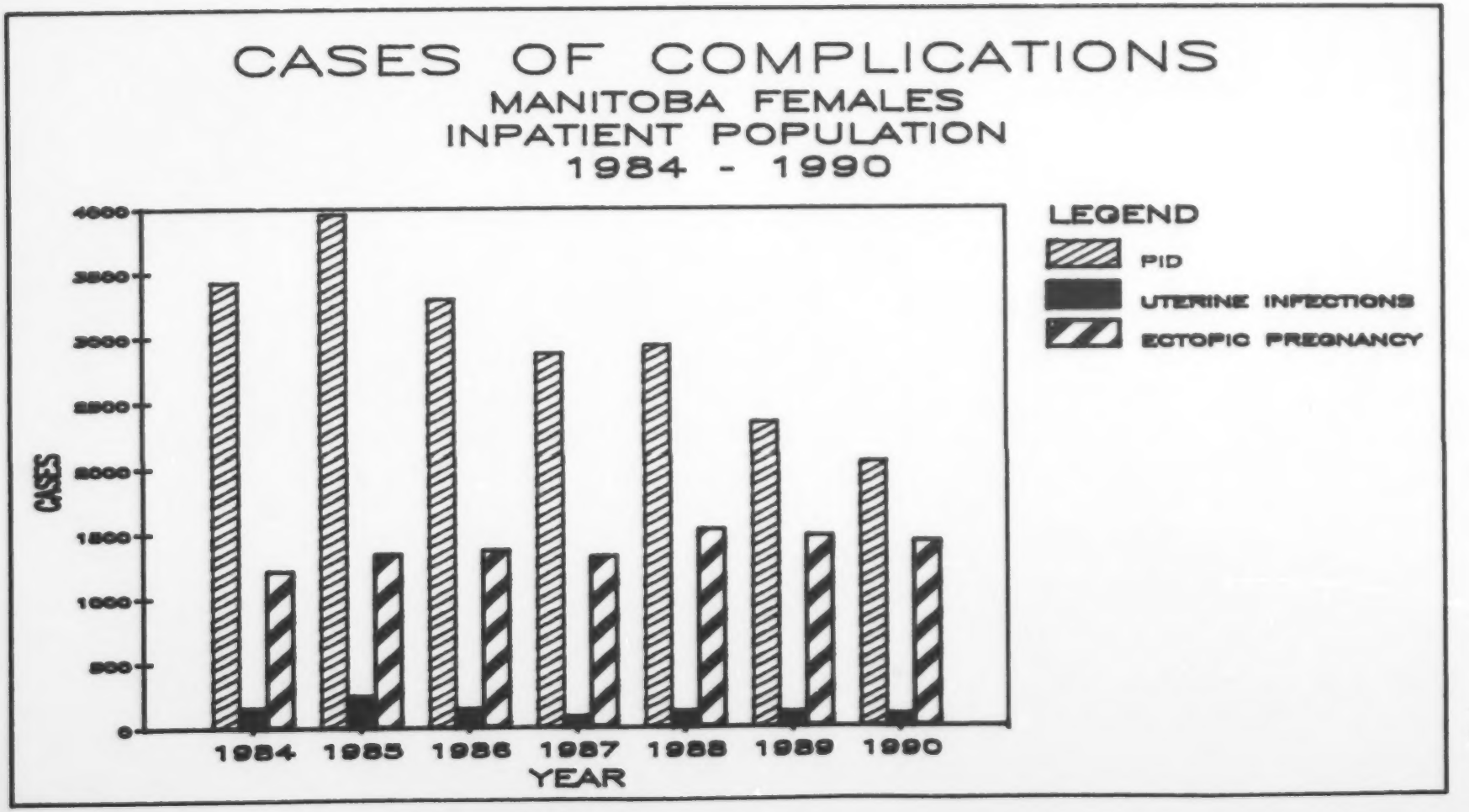


Figure 12: Days of Hospitalizations, Manitoba Females, 1984 - 1990

The number of days that were spent in hospital from 1984 - 1990:

a) with a diagnosis of PID decreased by 40 percent;
b) with a diagnosis of uterine infection decreased by 30 percent; and
c) with a diagnosis of ectopic pregnancy increased by 18 percent.

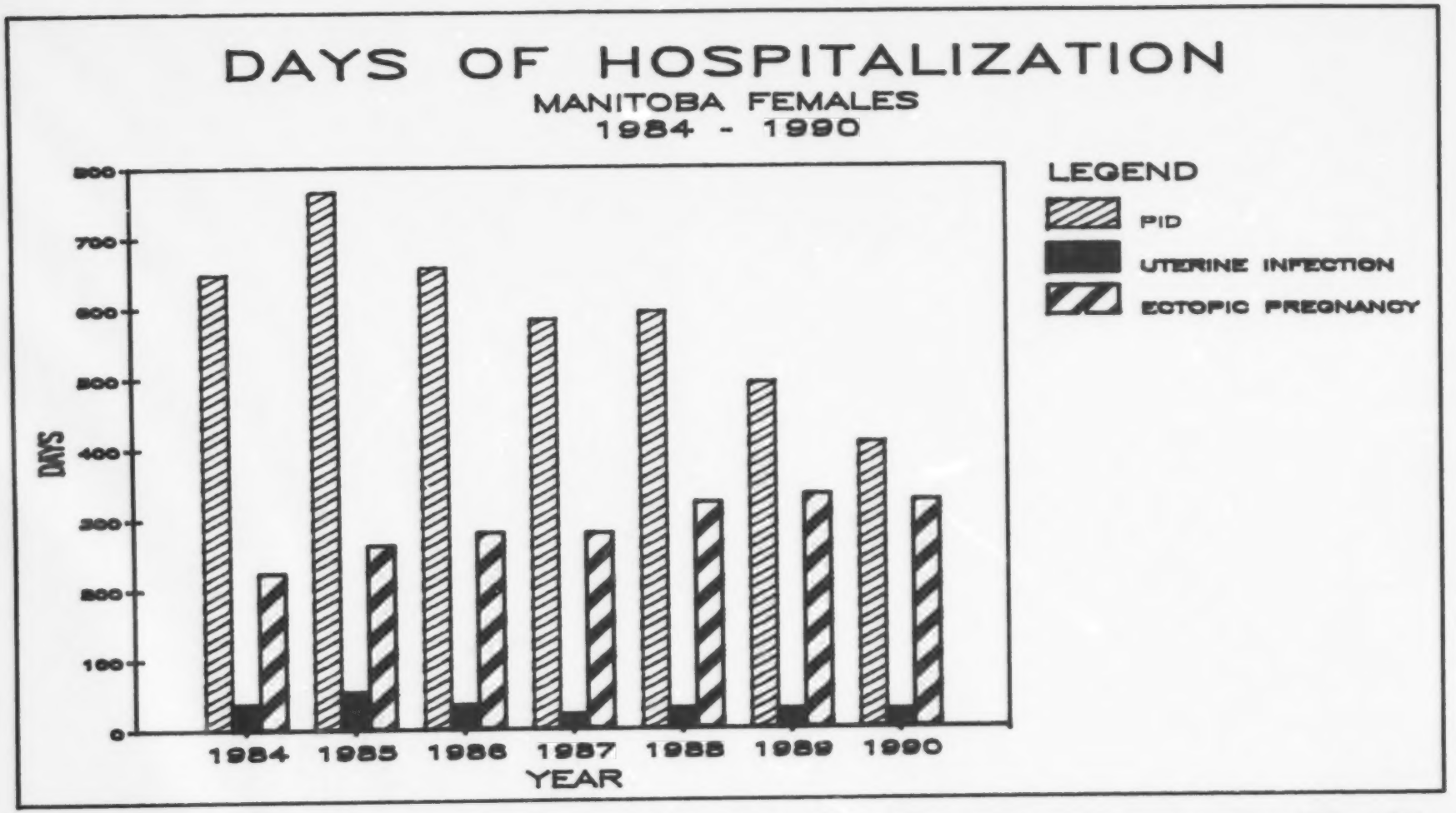


Figure 13: **Costs of Complications, Manitoba Females, Inpatient Population**

The hospital costs based on the per diem rate for each year between 1984 - 1990:

a) decreased by less than 1 percent for patients who were admitted with the diagnosis of PID;
b) increased by 6 percent for patients who were admitted with a diagnosis of uterine infections; and
c) increased by 95 percent for patients who were admitted with a diagnosis of ectopic pregnancy.